

SITE ASSESSMENT REPORT
FOR
2100 S. KOSTNER SITE
CHICAGO, COOK COUNTY, ILLINOIS
TDD: S05-9602-002
PAN: 6F0201SIT0

February 28, 1996

### Prepared for:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Emergency and Enforcement Response Branch
77 West Jackson Boulevard
Chicago, Illinois 60604

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Date: 2/28/96

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# ecology and environment, inc.

111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415 International Specialists in the Environment

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### 1. INTRODUCTION

The United States Environmental Protection Agency (U.S. EPA) has tasked the Superfund Technical Assessment and Response Team (START) contractor. Ecology and Environment, Inc. (E & E), under Technical Direction Document (TDD) S05-9602-002, to assess site conditions and threats to human health and the environment at the 2100 S. Kostner site located in Chicago, Cook County, Illinois.

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### 2. BACKGROUND

### 2.1 SITE DESCRIPTION

The 2100 S. Kostner site is located in Chicago, Cook County, Illinois. The site occupies approximately 5.5 acres near the intersection of Kostner Avenue and Cermak Road (Figure 2-1). The site includes approximately 52,000 cubic yards of construction and demolition debris made up of soil, concrete, asphalt, brick, wood, and miscellaneous metal and plastic scrap.

The debris is arranged in a series of irregular shaped, interconnected piles situated on a paved base. The debris does not appear to extend beneath the surrounding grade. The perimeter of the waste pile measures 550 feet on the northwest side, 300 feet on the east side, and 520 feet on the south side; the mean height of the pile is approximately 10 feet. A wide path on the east side provides access to the top of the pile. The site is surrounded by a locked chain-link and barbed wire fence (Figure 2-2).

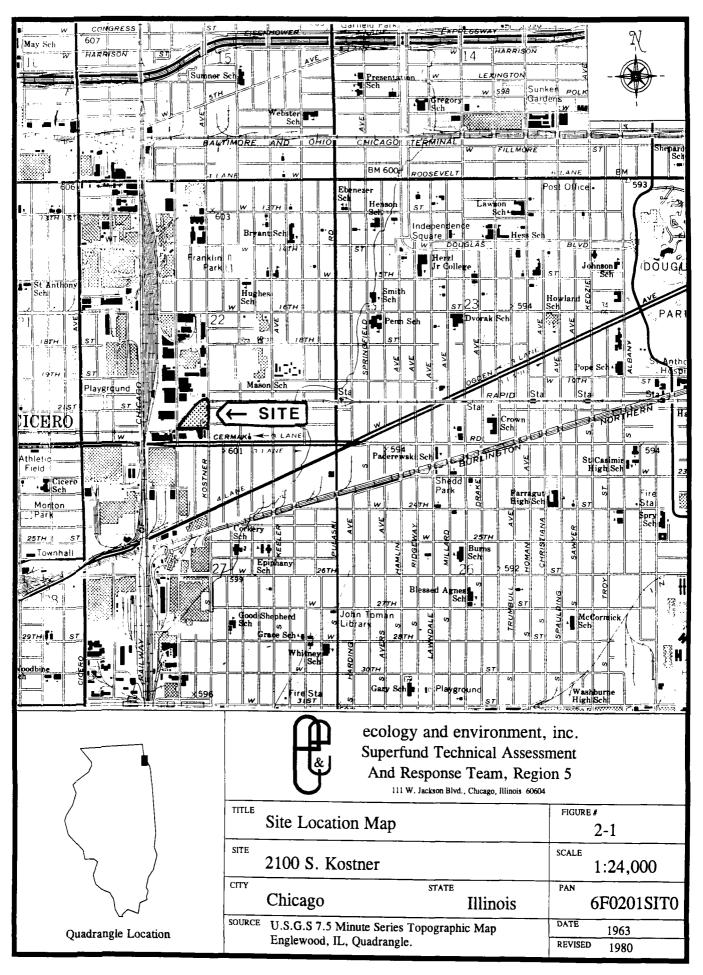
The site is situated in a mixed residential, industrial, and commercial development. A commuter rail line runs adjacent to the north and west sides of the site. Several manufacturing facilities and a trucking terminal are located beyond the rail lines. A small warehouse and carwash are located south of the site. Occupied homes are located directly east of the site, on Kostner Avenue.

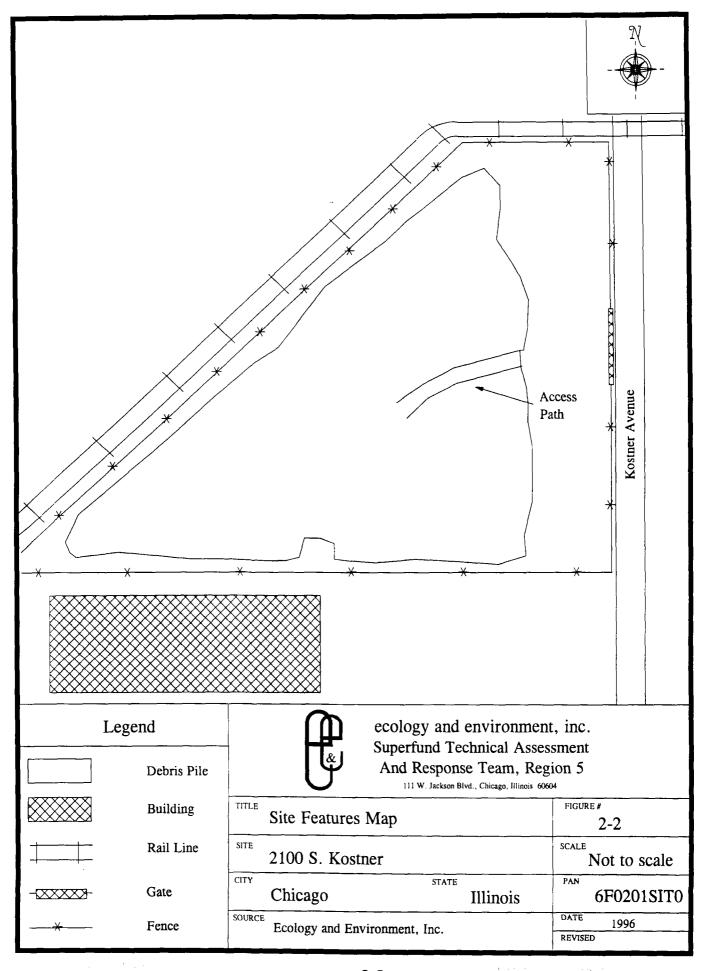
#### 2.2 SITE HISTORY

The site was formerly operated as an open dump for construction and demolition debris by the Krisjon Construction Company, and MCC Contractors, Inc. The site is currently inactive. The site was owned by John Christopher while the dumping occurred.

The dumping occurred during the 1980s, however, precise information on the period of dumping is not available. The United States Geological Survey map for the site area indicated that two buildings were located on site in 1980; these buildings are no longer standing. Information on the use and ownership of these buildings is not available.

In 1994, U.S. EPA removed approximately 20 drums of paint waste and other materials from the site.





### 3. SITE ASSESSMENT

On February 8, 1996, START members (STARTMs) Donovan Robin and Karen Rydzewski conducted a site assessment of the 2100 S. Kostner site. They were accompanied by U.S. EPA's On-Scene Coordinator (OSC) Brad Benning and U.S. EPA Geologist John Ular. Moses Walker of the Chicago Department of the Environment was also present during the site assessment. E & E START retained the services of R. Carlson and Sons, Inc., of Mokena, Illinois, for excavation of test pits. Refer to Appendix A for photodocumentation of site assessment activities.

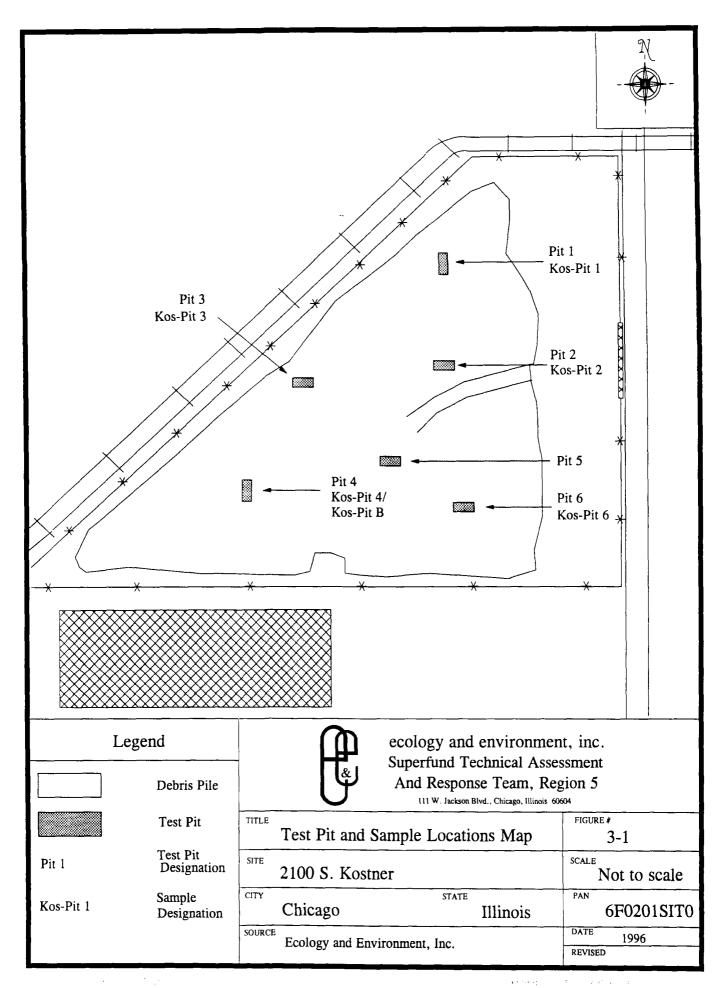
Six test pits were excavated on site. Five of the test pit locations were selected to obtain representative soil samples and visual observations of areas throughout the waste piles and one location was selected based on magnetometer survey results. A Kobelko SK200 excavator was used to excavate test pits approximately 10 feet long and 4 feet wide. Depth of the pits was variable and depended upon the ability of the excavator to penetrate the material encountered.

The material excavated was placed in stockpiles, visually examined, and screened for volatile organic compounds (VOCs) using a flame ionizing detector (FID) in six to ten areas of the pile. START collected soil samples from five of the pits. The soil samples were collected using a stainless steel spoon and bowl to obtain a homogenized composite soil sample from six to ten locations of the stockpiled soil. The test pits were backfilled following collection of the sample. Refer to Figure 3-1 for locations of the test pits and soil samples, and Table 3-1 for further description of the test pits and samples.

The samples were picked up on February 9, 1996, by a representative of Heritage Laboratories of Romeoville, Illinois. The samples were analyzed for toxicity characteristic leachate procedure (TCLP) metals, TCLP VOCs, TCLP semivolatile organic compounds (SVOCs), and total polychlorinated biphenyls (PCBs) under analytical TDD S05-9602-003. A fourteen-day turnaround was requested for an Office of Solid Waste and Emergency Response (OSWER) Level II quality assurance/quality control (QA/QC) data package.

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### Table 3-1

### TEST PIT DESCRIPTIONS AND SAMPLE SUMMARY 2100 S. KOSTNER SITE CHICAGO, COOK COUNTY, ILLINOIS FEBRUARY 8, 1996

Pit Designation	Sample Designation	Pit Dimensions (1 x w x d) (feet)	Pit Location/ Coordinates	FID readings above background (ppm)	Description of Material Excavated
Pit 1	Kos-Pit 1	10 x 4 x 13	North side of pile. N 41° 51' 10.6" W 87° 44' 09.8"	0	Loose, dark brown soil mixed with rocks, brick, wood and metal debris, no unusual odors or colors.
Pit 2	Kos-Pit 2	10 x 4 x 12	Northeast side of pile. N 41° 51' 10.9" W 87° 44' 09.0"	3-5	Loose, dark brown soil mixed with rocks, brick, and metal debris, no unusual odors or colors.
Pit 3	Kos-Pit 3	10 x 4 x 9	West side of pile. N 41° 51' 09.2" W 87° 44' 11.1"	0	Loose, sandy, light to medium brown soil mixed with rock and concrete debris, no unusual odors or colors.
Pit 4	Kos-Pit 4/ Kos-Pit B (duplicate)	10 x 4 x 15	South side of pile. N 41° 51' 09.7" W 87° 44' 10.5"	0-2	Loose, dark brown-black soil mixed with rock, concrete debris and metal reinforcement bars, no unusual odors or colors.
Pit 5	NA	10 x 4 x 10	East side of pile. ND	0-25	Dark brown soil mixed with black clay, large asphalt and concrete fragments, metal debris, faint motor-oil smell and black stains observed.
Pit 6	Kos-Pit 6	6 x 4 x 4	Southeast side of pile. N 41° 51' 08.6" W 87° 44' 05.4"	0	Black soil mixed with pulverized asphalt and large asphalt fragments, no unusual colors or odors.

Key:

NA = Not applicable.

ND = Not determined.

FID = Flame ionizing detector.

ppm = Parts per million.

length.
 w = width.
 d = depth.

Source: E & E, Inc., START, February 8, 1996, Field Logbook, 2100 S. Kostner Site.

### 4. ANALYTICAL RESULTS

Analytical results of composite soil samples collected from test pits at the 2100 S. Kostner site indicate that the material disposed at the site does not exhibit the characteristics of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Also, the material disposed on site does not exhibit levels of PCBs in excess of removal limits established by the Toxic Substances Control Act (TSCA). Analytical results are summarized in Table 4-1. The validated QA/QC package is included in Appendix B.

The RCRA hazardous waste criteria for toxicity of regulated metals. VOCs, and SVOCs is determined by the TCLP result. A material is considered a hazardous waste if the concentration of any regulated parameter exceeds the regulatory limits. TSCA has established a level of 50.0 milligrams per kilogram (mg/kg) as the removal action level for PCBs.

None of the samples results exceeded RCRA levels for hazardous waste or TSCA removal action levels.

### Table 4-1

### ANALYTICAL RESULTS 2100 S. KOSTNER SITE CHICAGO, COOK COUNTY, ILLINOIS FEBRÜARY 8, 1996

	Sample Designation					
Parameter	Kos-Pit 1	Kos-Pit 2	Kos-Pit 3	Kos-Pit 4	Kos-Pit B <sup>a</sup>	Kos-Pit 6
TCLP Arsenic (mg/L)	ND	ND	ND	0.25	0.23	ND
TCLP Cadmium (mg/L)	0.03	0.007	10.0	0.01	0.01	ND
TCLP Lead (mg/L)	0.42	0.47	0.07	ND	ND	ND
Total Aroclor 1248 (mg/kg)	0.15	ND	ND	ND	ND	ND
Total Aroclor 1254 (mg/kg)	0.058 <sup>h</sup>	().049 <sup>h</sup>	0.05 <sup>b</sup>	ND	ND	ND
Total Aroclor 1260 (mg/kg)	0.085	0.045	0.026	0.067	0.062	ND
TCLP VOCs (mg/L)	ND	ND	ND	ND	ND	ND
TCLP SVOCs (mg/L)	ND	ND	ND	ND	ND	ND

### Key:

Duplicate of sample Kos-Pit 4.

Estimated value due to matrix interference.

ND = Not detected.

TCLP = Toxicity characteristics leaching procedure.

mg/L = Milligrams per liter.
mg/kg = Milligrams per kilogram.
VOCs = Volatile organic compounds.
SVOCs = Semivolatile organic compounds.

Source: Heritage Laboratories, February 16, 1996, Analytical Data Package, TDD: S05-9602-803, Romeoville, Illinois.

 $(x+ix_{i}^{2}) = (x-ix_{i}x_{i}^{2})_{i} = (x-ix_{i}x_{i})_{i} + (x-ix_{i}x_{i})_{i} +$ 

### 5. DISCUSSION OF POTENTIAL THREATS

Conditions present at the 2100 S. Kostner site do not warrant removal actions as set forth in paragraph (b) (2) of Section 300.415 of the National Oil and Hazardous Substances Contingency Plan (NCP). Analytical results of composite soil samples collected from test pits at the 2100 S. Kostner site indicate that the material disposed at the site does not exhibit the characteristics of hazardous waste as defined by RCRA. Also, the material disposed on site does not exhibit levels of PCBs in excess of removal limits established by TSCA.

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### 6. REMOVAL COST ESTIMATE

Removal of the 52,000 cubic yards of construction and demolition debris material from the site to a permitted RCRA Subtitle D landfill would cost approximately \$ 1,678,000. The methods and costs are explained as follows: (please note this cost estimate does not include administrative or project management costs).

### **EXCAVATION**

- Assuming use of one CAT 350 or equivalent excavator to load 40 trucks per day with 15 cubic yards (yd³) of debris.
- 15 yd $^3$ /load x 60 loads/day = 900 yd $^3$ /day removed.
- $52,000 \text{ yd}^3/900 \text{ yd}^3/\text{day} = 58 \text{ days of excavation}$ .
- 58 days x \$ 2,000/day machine rental and labor = \$ 116,000 total excavation cost.

### TRANSPORTATION

- Assuming use of 6 to 7 trucks to transport a total of 60 loads per day to a facility within 25 miles of Chicago.
- 58 days x 60 loads/day = 3,480 loads.
- $$150/load \times 3,480 loads = $522,000 total transportation cost.$

### DISPOSAL

- Assume all material is nonhazardous, also assume use of a permitted subtitle D facility.
- $\$ 20/\text{yd}^3 \times 52,000 \text{ yd}^3 = \$ 1,040,000 \text{ total disposal cost.}$

Section 184 Section

### APPENDIX A

### **PHOTODOCUMENTATION**

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Sec.



Date: 02/08/96 Time: 0925 Frame: 01 Direction: North

Site Name: 2100 S. Kostner TDD: S05-9602-002 Photographer: D. Robin

Comments: Test Pit 1, view of excavated material.



Date: 02/08/96 Time: 0925 Frame: 02 Direction: North

Site Name: 2100 S. Kostner TDD: S05-9602-002 Photographer: D. Robin

Comments: Test Pit 1, view of excavation.



Date: 02/08/96 Time: 0955 Frame: 04 Direction: East

Site Name: 2100 S. Kostner TDD: S05-9602-002 Photographer: D. Robin

Comments: Test Pit 2, view of excavated material.



Date: 02/08/96 Time: 0955 Frame: 05 Direction: West

Site Name: 2100 S. Kostner TDD: S05-9602-002 Photographer: D. Robin

Comments: Test Pit 2, view of excavation.



Date: 02/08/96 Time: 1022 Frame: 07 Direction: South

Site Name: 2100 S. Kostner TDD: S05-9602-002 Photographer: K. Rydzewski

Comments: Test Pit 3, view of excavated material, and sample collection.



Date: 02/08/96 Time: 1022 Frame: 08 Direction: West

Site Name: 2100 S. Kostner TDD: S05-9602-002 Photographer: K. Rydzewski

Comments: Test Pit 3, view of excavation.



Date: 02/08/96 Time: 1055 Frame: 12 Direction: West

Site Name: 2100 S. Kostner TDD: S05-9602-002 Photographer: K. Rydzewski

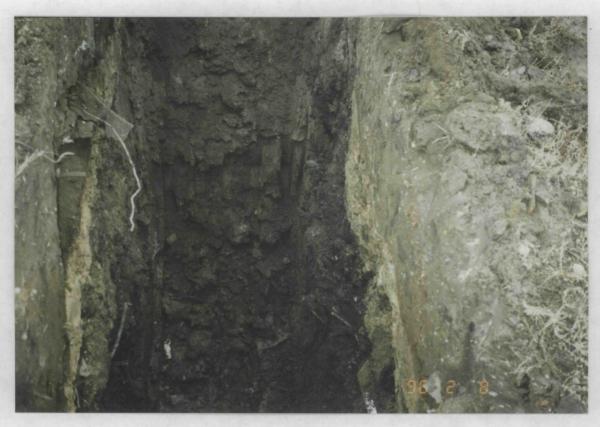
Comments: Test Pit 4, view of excavation.



Date: 02/08/96 Time: 1055 Frame: 14 Direction: West

Site Name: 2100 S. Kostner TDD: S05-9602-002 Photographer: K. Rydzewski

Comments: Test Pit 4, view of excavated material.



Date: 02/08/96 Time: 1114 Frame: 15 Direction: West

Site Name: 2100 S. Kostner TDD: S05-9602-002 Photographer: K. Rydzewski

Comments: Test Pit 5, view of excavation.



Date: 02/08/96 Time: 1114 Frame: 17 Direction: Southwest

Site Name: 2100 S. Kostner TDD: S05-9602-002 Photographer: K. Rydzewski

Comments: Test Pit 5, view of excavated material.



Date: 02/08/96 Time: 1132 Frame: 18
Site Name: 2100 S. Kostner TDD: S05
Comments: Test Pit 6, excavation of test pit.

Frame: 18 Direction: South TDD: S05-9602-002 Photographer: K. Rydzewski

### APPENDIX B

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### ANALYTICAL RESULTS

### ecology and environment, inc.

International Specialists in the Environment

111 West Jackson Boulevard Chicago, Illinois 60604

Tel: (312) 663-9415. Fax: (312) 663-0791

### MEMORANDUM

February 23, 1996 DATE:

TO: Donovan Robin, START Project Manager, E & E,

Chicago, Illinois

David Hendren, START Analytical Services Manager, FROM:

E & E, Chicago, Illinois

THROUGH: Mary Jane Ripp, Alternate START Leader, E & E,

Chicago, Illinois

SUBJECT: Organic Data Quality Review for Toxicity

> Characteristic Leaching Procedure (TCLP) Volatile Organic Compounds, 2100 S. Kostner, Chicago, Cook

County, Illinois

REFERENCE: Project TDD S05-9602-002 Analytical TDD S05-9602-803

> Project PAN 6F0201SIQ0 Analytical PAN 6FAC01TAA0

The data quality assurance (QA) review of six soil samples collected from the 2100 S. Kostner site is complete. The samples were collected on February 8, 1996, by the Superfund Technical Assessment and Response Team (START) contractor, Ecology and Environment, Inc. (E & E). The samples were submitted to Heritage Laboratories, Romeoville, Illinois, for analyses. laboratory analyses were performed according to the United States Environmental Protection Agency (U.S. EPA) Solid Waste 846 Methods 1311 and 8260.

### Sample Identification

Laboratory
Identification No.
C175475
C175476
C175477
C175478
C175479
C175480

### Data Qualifications:

### I. <u>Sample Holding Time: Acceptable</u>

The samples were collected on February 8, 1996, and analyzed on February 12, 1996. This is within the 14-day holding time limit.

# II. <u>Gas Chromatography/Mass Spectrometry (GC/MS) Tuning:</u> Acceptable

GC/MS tuning to meet ion abundance criteria using bromofluorobenzene (BFB) were acceptable and samples were analyzed within 12 hours of BFB tuning.

### III. <u>Calibrations:</u>

### • Initial Calibration: Acceptable

A five-point initial calibration was performed prior to analysis. All average response factors were greater than 0.05. The percent relative standard deviations (%RSDs) between response factors were less than 30% for all target compounds.

### • Continuing Calibration: Acceptable

The percent differences of the response factors were less than 25%, as required for detected target compounds.

### IV. Blank: Acceptable

A method blank was analyzed with the samples. No target compounds or contaminants were detected in the blank.

### V. <u>Internal Standards</u>: Acceptable

The areas of the internal standards in the samples were within -50% to +100% of the associated calibration check standard. The retention time of the internal standard was within the 30-second control limit.

### VI. Compound Identification: Not Applicable

None of the TCLP volatile organic compounds were detected in the samples.

### VII. Additional QC Checks: Acceptable

The recoveries of the surrogates used in the samples and blank were within the laboratory-established guidelines.

### VIII. Overall Assessment of Data for Use: Acceptable

The overall usefulness of the data is based on criteria for QA Level II as outlined in the Office of Solid Waste and Emergency Response (OSWER) Directive 9360.4-01 (April 1990), Data Validation Procedures, Section 5.0, VOAs By GC/MS analysis. Based upon the information provided, the data are acceptable for use.

### ecology and environment, inc. International Specialists in the Environment

111 West Jackson Boulevard Chicago, Illinois 60604

Tel: (312) 663-9415, Fax: (312) 663-0791

### MEMORANDUM

February 23, 1996 DATE:

TO: Donovan Robin, START Project Manager, E & E,

Chicago, Illinois

FROM: David Hendren, START Analytical Services Manager,

E & E, Chicago, Illinois

Mary Jane Ripp, Alternate START Leader, E & E, THROUGH:

Chicago, Illinois

Organic Data Quality Review for Toxicity SUBJECT:

Characteristic Leaching Procedure (TCLP) Semivolatile

Organic Compounds, 2100 S. Kostner, Chicago, Cook

County, Illinois

REFERENCE: Project TDD S05-9602-002 Analytical TDD S05-9602-803

> Project PAN 6F0201SIO0 Analytical PAN 6FAC01TAA0

The data quality assurance (QA) review of six soil samples collected from the 2100 S. Kostner site is complete. The samples were collected on February 8, 1996, by the Superfund Technical Assessment and Response Team (START) contractor, Ecology and Environment, Inc. (E & E). The samples were submitted to Heritage Laboratories, Romeoville, Illinois, for analyses. laboratory analyses were performed according to the United States Environmental Protection Agency (U.S. EPA) Solid Waste 846 Methods 1311 and 8270.

### Sample Identification

START	Laboratory
<u>Identification No.</u>	<u>Identification No.</u>
KOS-PIT 1	C175475
KOS-PIT 2	C175476
KOS-PIT 3	C175477
KOS-PIT 4	C175478
KOS-PIT 6	C175479
KOS-PIT B	C175480

### Data Qualifications:

### I. Sample Holding Time: Acceptable

The samples were collected on February 8, 1996, extracted on February 12, 1996, and analyzed on February 13, 1996. This is within the 14-day holding time limit, from collection to extraction, and 40-day limit from extraction to analysis.

## II. <u>Gas Chromatography/Mass Spectrometry (GC/MS) Tuning:</u> Acceptable

GC/MS tuning to meet ion abundance criteria using decaflourotriphenylphosphine (DFTPP) were acceptable and samples were analyzed within 12 hours of DFTPP tuning.

### III. <u>Calibrations:</u>

### • <u>Initial Calibration: Acceptable</u>

A five-point initial calibration was performed prior to analysis. All average response factors were greater than 0.05. The percent relative standard deviations (%RSDs) between response factors were less than 30% for all target compounds.

### • Continuing Calibration: Acceptable

The percent differences of the response factors were less than 25%, as required for detected target compounds.

### IV. Blank: Acceptable

A method blank was analyzed with the samples. No target compounds or contaminants were detected in the blank.

### V. <u>Internal Standards</u>: Acceptable

The areas of the internal standards in the samples were within -50% to +100% of the associated calibration check standard. The retention time of the internal standard was within the 30-second control limit.

### VI. Compound Identification: Not Applicable

None of the TCLP semivolatile organic compounds were detected in the samples.

### VII. Additional QC Checks: Acceptable

The recoveries of the surrogates used in the samples and blank were within the laboratory-established guidelines.

### VIII. Overall Assessment of Data for Use: Acceptable

The overall usefulness of the data is based on criteria for QA Level II as outlined in the Office of Solid Waste and Emergency Response (OSWER) Directive 9360.4-01 (April 1990), Data Validation Procedures, Section 4.0, BNAs By GC/MS analysis. Based upon the information provided, the data are acceptable for use.

# ecology and environment, inc.



International Specialists in the Environment

111 West Jackson Boulevard Chicago, Illinois 60604

Tel: (312) 663-9415, Fax: (312) 663-0791

### MEMORANDUM

DATE: February 26, 1996

TO: Donovan Robin, START Project Manager, E & E,

Chicago, Illinois

FROM: David Hendren, START Analytical Services Manager,

E & E, Chicago, Illinois

THROUGH: Mary Jane Ripp, Alternate START Leader, E & E,

Chicago, Illinois

SUBJECT: Organic Data Quality Review for Polychlorinated

Biphenyls (PCBs), 2100 S. Kostner, Chicago, Cook

County, Illinois

REFERENCE: Project TDD S05-9602-002 Analytical TDD S05-9602-803

Project PAN 6F0201SIQ0 Analytical PAN 6FAC01TAA0

The data quality assurance (QA) review of six soil samples collected from the 2100 S. Kostner site is complete. The samples were collected on February 8, 1996, by the Superfund Technical Assessment and Response Team (START) contractor, Ecology and Environment, Inc. (E & E). The samples were submitted to Heritage Laboratories, Romeoville, Illinois, for analyses. The laboratory analyses were performed according to the United States Environmental Protection Agency (U.S. EPA) Solid Waste 846 Method 8080.

### Sample Identification

START	Laboratory
Identification No.	Identification No.
KOS-PIT 1	C175475
KOS-PIT 2	C175476
KOS-PIT 3	C175477
KOS-PIT 4	C175478
KOS-PIT 6	C175479
KOS-PIT B	C175480

### Data Qualifications:

### I. Sample Holding Time: Acceptable

The samples were collected on February 8, 1996, extracted on February 13, 1996, and analyzed on February 13 and 14, 1996. This is within the 14-day holding time limit, from collection to extraction, and 40-day limit from extraction to analysis.

### II. <u>Instrument Performance: Acceptable</u>

The chromatographic resolution was adequate in the standard and sample chromatograms. Surrogate retention times were consistent in samples and standards.

### III. Calibrations:

### • Initial Calibration: Acceptable

A five-point initial calibration was performed prior to analysis. The percent relative standard deviations (%RSDs) between response factors were less than 20% for all detected PCBs.

### • Continuing Calibration: Acceptable

The percent differences of the response factors were less than 15%, as required for detected target compounds.

### IV. Blank: Acceptable

A method blank was analyzed with the samples. No target compounds or contaminants were detected in the blank.

### V. <u>Internal Standards</u>: Acceptable

The areas of the internal standards in the samples were within -50% to +100% of the associated calibration check standard. The retention time of the internal standard was within the 30-second control limit.

### VI. Compound Identification: Acceptable

The chromatographic patterns of the samples matched those in standard chromatograms.

### VII. Additional QC Checks: Qualified

The recoveries of the surrogates used in the samples C175478 and C175479 were below the laboratory-established guidelines. The positive result in sample C175478 was qualified as estimated, and flagged "J".

### VIII. Overall Assessment of Data for Use: <u>Acceptable</u>

The overall usefulness of the data is based on criteria for QA Level II as outlined in the Office of Solid Waste and Emergency Response (OSWER) Directive 9360.4-01 (April 1990), Data Validation Procedures, Section 7.0, PCBs. Based upon the information provided, the data are acceptable for use.

### Data Qualifiers and Definitions:

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the required detection limits or quality control criteria were not met.

### ecology and environment, inc. International Specialists in the Environment 111 West Jackson Boulevard

Chicago, Illinois 60604 Tel: (312) 663-9415, Fax: (312) 663-0791

### MEMORANDUM

DATE: February 26, 1996

TO: Donovan Robin, START Project Manager, E & E,

Chicago, Illinois

FROM: David Hendren, START Analytical Services Manager,

E & E, Chicago, Illinois

THROUGH: Mary Jane Ripp, Alternate START Leader, E & E,

Chicago, Illinois

SUBJECT: Inorganic Data Quality Review for Toxicity

Characteristic Leaching Procedure (TCLP) Metals, 2100

S. Kostner, Chicago, Cook County, Illinois

REFERENCE: Project TDD S05-9602-002 Analytical TDD S05-9602-803

Project PAN 6F0201SIQ0 Analytical PAN 6FAC01TAA0

The data quality assurance (QA) review of six soil samples collected from the 2100 S. Kostner site is complete. The samples were collected on February 8, 1996, by the Superfund Technical Assessment and Response Team (START) contractor, Ecology and Environment, Inc. (E & E). The samples were submitted to Heritage Laboratories, Romeoville, Illinois, for analyses. laboratory analyses were performed according to the United States Environmental Protection Agency (U.S. EPA) Solid Waste 846 Methods 1311, 6010, and 7470 (for mercury).

### Sample Identification

Laboratory
Identification No.
C175475
C175476
C175477
C175478
C175479
C175480

### Data Qualifications:

### I. <u>Sample Holding Time: Acceptable</u>

The samples were collected on February 8, 1996, and analyzed on February 13 and 15, 1996. Analyses for mercury were performed on February 14, 1996. This is within the six-month holding time limit (28 days for mercury).

### II. Calibration:

### • <u>Initial Calibration: Acceptable</u>

Recoveries for the initial calibration verification were within 90 to 110% (80 to 120% for mercury), as required. The correlation coefficient for mercury exceeded 0.995.

### • Continuing Calibration: Acceptable

All analytes included in the continuing calibration verification standard were within 90 to 110% (80 to 120% mercury), as required.

### III. Blanks: Acceptable

Calibration and preparation blanks were analyzed with each analytical batch. No target analytes were detected in the blanks.

### IV. <u>Instrument Interference Check Samples (ICSs)</u>: Acceptable

The ICSs were analyzed as required and recoveries were within acceptable limits.

### V. Overall Assessment of Data For Use: Acceptable

The overall usefulness of the data is based on criteria for QA Level II as outlined in the Office of Solid Waste and Emergency Response (OSWER) Directive 9360.4-01 (April 1990) Data Validation Procedures, Section 3.0, Metallic Inorganic Parameters. Based upon the information provided, the data are acceptable for use.

### CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC.	09-FEB-96		C175475
COMMERCIAL LABORATORY OPERATIONS	Complete	PO Nu	mber
1319 MARQUETTE DRIVE	22-FEB-96	E & E	
ROMEOVILLE, IL 60441	Printed	Sampl	ed
(708)378-1600	22-FEB-96	08-FEB-96	09:40

Report To

D. HENDREN ECOLOGY & ENVIRONMENT, INC. 77 WEST JACKSON BOULEVARD CHICAGO, IL 60604 Bill To

ACCOUNTS PAYABLE ECOLOGY & ENVIRONMENT, INC. 111 WEST JACKSON BLVD. (12TH FLOOR) CHICAGO, IL 60604

Sample Description

CLIENT ID: PIT 1
ANALYTICAL TDD: S05-9602-803 SAMPLE I.D.: KOS-PIT 1 COMPOSITE

Analyst: C. HERRO Analysis Date: 09-FEB-96	13, 23, 23, 24, 24, 24, 24, 24, 24, 24, 24, 24, 24		Test: P107.1.	Units
Parameter TOTAL SAMPLE WEIGHT	101.3	esult	Det. Limit	Grams
LIQUID FRACTION (GRAMS)	0			Grams
EXTRACTED SAMPLE	101.3		and and	Grams
SOLIDS SAMPLE			lem d	Percent
O E MM CITUE TECT	100		. Africa.	
9.5 MM SIEVE TEST	0.21	o osawenska		Passed
INITIAL PH	9.31		· · · · · · · · · · · · · · · · · · ·	Std. Units
ADJUSTED PH	1.64			Std. Units
BUFFER SOLUTION PH	4.93		<u> </u>	Std. Units
FINAL PH	5.69			Std. Units
VOLUME BUFFERED SOLUTION	2000			mL
VOLUME EXTRACT FILTERED	2000		S	mL
VOLUME LIQUID (ADD BACK)	0		g diser amend is	mL
TOTAL VOLUME FILTRATE	2000			l mL
AMBIENT TEMPERATURE	1 21		1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	Degrees C
INITIAL TIME	05.30		1. 21.	HRS
FINAL TIME	09.30			HRS
PHASE O VOLUME (REP 0) PHASE O WEIGHT	NA			mL
	NA NA	* * * * * * * * * * * * * * * * * * * *		Grams
PHASE O DENSITY	NA			g/mL
PHASE 1 VOLUME (REP 1)	NA			mL
PHASE I WEIGHT	NA			Grams
PHASE 1 DENSITY	NA NA	<u> </u>		g/mL

FAA OR ICP ACID DIGESTION (LEACHATE) SW846-301 Analyst: C. HERRO Analysis Date: 12-FEB-96		
Analyst: C. HERRO Analysis Date: 12-FEB-96 Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846+131	1 P107.1.0	Test: P130.8.0
Parameter	Result	Det. Limit Units
INITIAL WEIGHT OR VOLUME	50	mL
FINAL VOLUME	[ 50	-   mL

### HERITAGE ENVIRONMENTAL SERVICES, INC.

HERITAGE ENVIRONMENTAL SERVICES, INC.	ample ID: C175475 PIT 1		
ARSENIC ICP (1 POINT MSA) SW846-6010A Analyst: C. HERRO Analysis Date: 12-FEB-96 23:30 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0 Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131	O Instrument: ICP 0 1 P107.1.0	Test: M60	3.7.0
Parameter ARSENIC ADDITION 1	Result BDL 1.0	Det. Limit 0.05	mg/L
SAMPLE + ADD 1 DILUTION	0.0476 0.9755 1		Conc.
BARIUM ICP (1 POINT MSA) SW846-6010A  Analyst: C. HERRO Analysis Date: 12-FEB-96 23:30  Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.4  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131	Instrument: ICP 0 1 P107.1.0	Test: M60	4.7:0
Parameter	Result	Det. Limit	Units
BARIUM ADDITION 1	BDL 10	2.0	mg/L mg/L
SAMPLE	0.7849 1.694	1	Conc
SAMPLE + ADD 1 DILUTION	1.094	f	Conc
CADMIUM ICP (1 POINT MSA) SW846-6010A Analyst: C. HERRO Analysis Date: 12-FEB-96 23:30 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.4 Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131	1 P107.1.0	Test: M608	
Parameter CADMIUM	Result 0.03	Det. Limit 0.005	Units mg/L
ADDITION 1 SAMPLE	0.0306	hairm The second	mg/L Conc
SAMPLE + ADD 1 DILUTION	0.9606 1		Conc
CHROMIUM ICP (1 POINT MSA) SW846-6010A  Analyst: C. HERRO Analysis Date: 12-FEB-96 23:30  Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131	O Instrument: ICP O 1 P107.1.0	Test: M610	0.7.0
Parameter	Result	Det. Limit	Units
CHROMIUM ADDITION T	BDL   1.0	0.01	mg/L mg/L
SAMPLE	0.0019		Conc
SAMPLE + ADD 1 DILUTION	0.9509 " " " " " " " " " " " " " " " " " " "	l <sup>a</sup>	Conc
LEAD ICP (1 POINT MSA) SW846-6010A  Analyst: C. HERRO Analysis Date: 12-FEB-96 23:30  Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131	) Instrument: ICP		\$2 <b>7</b> 0
Parameter	Result	Det. Limit	Units
LEAD ADDITION 1	0.42 1.0 0.4172	0.05	mg/L mg/L Conc
SAMPLE + ADD 1. DILUTION	1.345 1		Conc

The second of th	Test: M628	
Result BDL 1.0 0.0067 1.006	Det. Limit 0.10	Units mg/L mg/L Conc Conc
	Test: <b>M</b> 630	
Result BDL 1.0 -0.0070 0.744 1	Det. Limit 0.02	Units mg/L mg/L Conc Conc
	Test: P131.9.(	)
Result 10 100	Det. Limit	Units ML ML
Instrument: CVAA ,O	90000000 F	
Result BDL 0.01 -0.003 0.0106	Det. Limit 0.005	mg/L Conc
		Conc
ON SW846-3510B	Test: P233.4.(	
	Test: P233.4.(	
P107.1.0 Result	Test: P233.4.0	Units mL mL
	Result BDL 1.0 0.0067 1.006 1  Instrument: ICP Result BDL 1.0 -0.0070 0.744 1  P107.1.0  Result 10 100  Instrument: CVAA 0.0 P107.1.0  Result BDL 1.0 Result	Result   Det. Limit   0.10   1.0   0.0067   1.006   1

Parameter	Result	Det. Limit	Units
PYRIDINE	BDL	250	ug/L
2-METHYLPHENOL (O-CRESOL)	BDL	130	ug/L
3-METHYLPHENOL (M-CRESOL)	BDL	130	ug/L
4-METHYLPHENOL (P-CRESOL)	BDL	130	ug/L
PENTACHLOROPHENOL	BDL	250	ug/L
2,4,5-TRICHLOROPHENOL	BDL	130	ug/L
2,4,6-TRICHLOROPHENOL	BDL	130	ug/L
		İ	• • •
SURROGATE RECOVERY			
2-FLUOROPHENOL	64		% Rec
PHENOL - D5	58		% Rec
NITROBENZENE-D5	82		% Rec
2-FLUOROBIPHENYL	82	:	% Rec
2,4,6-TRIBROMOPHENOL	81	}	% Rec
TÉRPHENYL-D14			% Rec
1.1 dilution	<u> </u>		

1:1 dilution

3 & 4 Methyl Phenol co-elute so identification is tentative.

ZERO HEADSPACE EXTRACTION (TCLP) SW846-1311 Analyst: T. MCDEVITT, JR. Analysis Date: 09-FEB-96		Test: P108.1.0	
Parameter TOTAL SAMPLE WEIGHT	Result 25.3	Det. Limit	Units Grams
	NA		
EXTRACTED SAMPLE		·	Grams
PHASE 0 VOLUME (REP 0) PHASE 1 VOLUME (REP 1)	4//    NA		mL mL
FINAL PH	5.75		Std. Units

Param	eter		Result	Det. Limit	Units
BENZENE		BDL		50	ug/L
		BDL	******** ·	50	ug/L
CHLOROBENZENE		BDL		50	ug/L
CHLOROFORM		BDL	·	50	ug/L
,2-DICHLOROETHANE		BDL		50	ug/L
, 1-DICHLOROETHYLENE	e to the second second	BDL	·	50	ug/L
METHYL ETHYL KETONE		BDL		100	ug/L
ETRACHLOROETHYLENE		BDL		50	ug/L
TRICHLOROETHYLENE		BDL		50	ug/L
INYL CHLORIDE		BDL	. ** . ***. *	100	ug/L
SURROGATE RECOVERY	Tital and the				n.a 
ICHLOROETHANE-D4		98	erij e etek		% Rec
OLUENE-D8		96			% Rec
-BROMOFLUOROBENZENE	e Arriva de la companio de la compa	96		1	% Rec

SONICATION EXTRACTION FOR ORGANICS SW846-3550( Analyst: S. BUSSEY Analysis Date: 13-FEB-96	Test: P231.1.	0	
Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	30.4		Grams
FINAL VOLUME	10		mL

POLYCHLORINATED BIPH Analyst: S. BUSSEY Prep: SONICATION EXTRACTION	Analysis Date: 14-FE	B-96 Instrument: GC/E	D Test:	0301.2.0
Par	ameter	Result	Det.	Limit Units
PCB AROCHLOR 1016		BDL		0.017 mg/kg
PCB AROCHLOR 1221	The second of the second	BDL	The second second	0.017 mg/kg
PCB AROCHLOR 1232		BDL	ľ	0.017 mg/kg
PCB AROCHLOR 1242		BDL	1	0.017 mg/kg
PCB AROCHLOR 1248	·	0.15	· 1	0.017 mg/kg
PCB AROCHLOR 1254	ARCHITECTURE	* 0.058		0.017 mg/kg
PCB AROCHLOR 1260		0.085		0.017 mg/kg
PCB AROCHLOR 1262	 	BDL		0.017 mg/kg
*Arochlor 1254 is es				

Sample Comments

\* See Note for Parameter BDL Below Detection Limit NA Not Applicable

This Certificate shall not be reproduced, except in full, without the written approval of the lab.

Approved:

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC.	09-FEB-96		C175476
COMMERCIAL LABORATORY OPERATIONS	Complete	PO Nu	umber
1319 MARQUETTE DRIVE	22-FEB-96	E & E	
ROMEOVILLE, IL 60441	Printed	Samp	led
(708)378-1600	22-FEB-96	08-FEB-96	5 09:50

Report To

D. HENDREN ECOLOGY & ENVIRONMENT, INC. 77 WEST JACKSON BOULEVARD CHICAGO, IL 60604 Bill To

ACCOUNTS PAYABLE ECOLOGY & ENVIRONMENT, INC. 111 WEST JACKSON BLVD. (12TH FLOOR) CHICAGO, IL 60604

Sample Description

CLIENT ID: PIT 2 ANALYTICAL TDD: S05-9602-803 SAMPLE I.D.: KOS-PIT 2 COMPOSITE

TOX CHAR LEACHING PROCEDURE (TCLP W/ O	DRGANICS) SW846-1311 FEB-96	Test: P107:1.0
Parameter	Result	Det. Limit Units
TOTAL SAMPLE WEIGHT	102.2	Grams
LIQUID FRACTION (GRAMS)	0	Grams
EXTRACTED SAMPLE	102.2	Grams
SOLIDS	100	Percent
9.5 MM SIEVE TEST		Passed
INITIAL PH	9.13	Std. Uni
ADJUSTED PH	1.65	Std. Uni
BUFFER SOLUTION PH	4.93	Std. Uni
FINAL PH	5.71	Std. Uni
VOLUME BUFFERED SOLUTION	2000	in in the second of the second
VOLUME EXTRACT FILTERED	2000	mL
VOLUME LIQUID (ADD BACK)	0	mL mL
TOTAL VOLUME FÎLTRATE	2000	mL
AMBIENT TEMPERATURE	21	Degrees
INITIAL TIME	05.30	HRS
FINAL TIME	09.30	HRS
PHASE O VOLUME (REP 0)	NA .	l mL
PHASE O WEIGHT	NA MALLEMA	Grams
PHASE O DENSITY	NA NA	g/mL
PHASE 1 VOLUME (REP 1)	NA ***	mL
PHASE 1 WEIGHT	NA	Grams
PHASE 1 DENSITY	NA NA	g/mL

FAA OR ICP ACID DIGESTION (LEACHATE) SW846-301 Analyst: C. HERRO Analysis Date: 12-FEB-96 Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311	Substitution of the state of th	Test: P130.8.	0
Parameter INITIAL WEIGHT OR VOLUME FINAL VOLUME	Result 50 50	Det. Limit	Units mL mL

ARSENIC ICP (1 POINT MSA) SW846-6010A  Analyst: C. HERRO Analysis Date: 12-FEB-96 23:30  Prep: FAA OR TCP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131		Test: M60	3.7.0
Parameter ARSENIC ADDITION 1 SAMPLE SAMPLE + ADD 1 DILUTION	Result BDL 1.0 0.0346 1.001	Det. Limit 0.05	Units mg/L mg/L Conc Conc
BARIUM ICP (1 POINT MSA) SW846-6010A  Analyst: C. HERRO Analysis Date: 12-FEB-96 23:30  Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131	<b>)</b>	Test: M60	4:7:0
Parameter BARIUM ADDITION 1 SAMPLE SAMPLE + ADD 1 DILUTION	Result BDL 1.0 0.7704 1.744	Det. Limit 2.0	Units mg/L mg/L Conc Conc
CADMIUM ICP (1 POINT MSA) SW846-6010A  Analyst: C. HERRO Analysis Date: 12-FEB-96 23:30  Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1310		Test: M60	3.7.0
Parameter CADMIUM ADDITION 1 SAMPLE SAMPLE + ADD 1 DILUTION	Result 0.007 1.0 0.0075 0.9546 1	Det. Limit 0.005	Units mg/L mg/L Conc Conc
CHROMIUM ICP (1 POINT MSA) SW846-6010A  Analyst: C. HERRO Analysis Date: 12-FEB-96 23:30  Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131	) I P107 1 0	Test: M61	0.7;0
Parameter CHROMIUM ADDITION 1 SAMPLE SAMPLE + ADD 1 DILUTION	Result BDL 1.0 0.0017 0.9828 1	Det. Limit 0.01	Units mg/L mg/L Conc Conc
LEAD ICP (1 POINT MSA) SW846-6010A  Analyst: C. HERRO Analysis Date: 12-FEB-96 23:30  Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311	Instrument: ICP	Test: M61	5.7.0
Parameter LEAD ADDITION 1 SAMPLE SAMPLE + ADD 1 DILUTION	Result 0.47 1.0 0.4758 1.409	Det. Limit 0.05	Units mg/L mg/L Conc Conc

	Instrument: ICP	Test: M628	1.7.0
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0 Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311			
Parameter	Result	Det. Limit	Units
SELENIUM	BDL		mg/L
ADDITION 1	1.0	"	mg/L
SAMPLE	0.0015		Conc
SAMPLE + ADD 1	1.058		Conc
DILUTION	1		
SILVER ICP (1 POINT MSA) SW846-6010A  Analyst: C. HERRO Analysis Date: 12-FEB-96 23:30  Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311	Instrument: ICP	Test; M630	0.7.0
Parameter	Result	Det. Limit	Units
SILVER	BDL	0.02	mg/L
ADDITION 1	1.0	1	mg/L
SAMPLE	-0.0089		Conc
SAMPLE + ADD 1	0.8635		Conc
DILUTION	1		
Analysis Date: 12-FEB-96 Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311  Parameter INITIAL WEIGHT OR VOLUME FINAL VOLUME	P107.1.0  Result  10 100	Det. Limit	Units mL mL
MERCURY CVAA (1 POINT MSA) SW846-7470A Analysis Date: 14-FEB-96		Test: M620.6.0	)
MERCURY CVAA (1 POINT MSA) SW846-7470A	Instrument: CVAA	Test: M620.6.0	)
MERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: I. NOHA Analysis Date: 14-FEB-96  Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131.9  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311  Parameter	Instrument: CVAA: .0 P107.1.0 Result	Det. Limit	Units
MERCURY CVAA (1 POINT MSA) SW846-7470A Analyst: I. NOHA Analysis Date: 14-FEB-96 Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131.9 Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311  Parameter  MERCURY	Instrument: CVAA .0 P107.1.0 Result		Units mg/L
MERCURY CVAA (1 POINT MSA) SW846-7470A Analysis Date: 14-FEB-96 Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131.9 Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311  Parameter MERCURY ADDITION 1	Instrument: CVAA .0 P107.1.0 Result BDL 0.01	Det. Limit	Units mg/L mg/L
MERCURY CVAA (1 POINT MSA) SW846-7470A Analyst: I. NOHA Analysis Date: 14-FEB-96 Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131.9 Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311  Parameter  MERCURY  ADDITION 1 SAMPLE	Instrument: CVAA: .0 P107.1.0  Result BDL 0.01 -0.00025	Det. Limit	Units mg/L mg/L Conc
MERCURY CVAA (1 POINT MSA) SW846-7470A Analyst: I. NOHA Analysis Date: 14-FEB-96 Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131.9 Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311  Parameter  MERCURY ADDITION 1	Instrument: CVAA .0 P107.1.0 Result BDL 0.01	Det. Limit 0.005	Units mg/L mg/L
MERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: I. NOHA Analysis Date: 14-FEB-96  Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131.9  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311  Parameter  MERCURY  ADDITION 1  SAMPLE SAMPLE + ADD 1  DILUTION  GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION  Analyst: H. GIAN Analysis Date: 12-FEB-96  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311	Instrument: CVAA .0 P107.1.0 Result BDL 0.01 -0.00025 0.0106 1 ON SW846-3510B	Det. Limit 0.005	Units mg/L mg/L Conc Conc
MERCURY CVAA (1 POINT MSA) SW846-7470A Analyst: I. NOHA Analysis Date: 14-FEB-96 Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131.9 Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311  Parameter  MERCURY ADDITION 1 SAMPLE SAMPLE + ADD 1 DILUTION  GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION Analyst: H. QIAN Analysis Date: 12-FEB-96 Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311 Parameter	Instrument: CVAA .0 P107.1.0 Result BDL 0.01 -0.00025 0.0106 1 ON SW846-3510B P107.1.0	Det. Limit 0.005	Units mg/L mg/L Conc Conc
MERCURY CVAA (1 POINT MSA) SW846-7470A Analyst: I. NOHA Analysis Date: 14-FEB-96 Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131.9 Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311  Parameter  MERCURY ADDITION 1 SAMPLE SAMPLE + ADD 1 DILUTION  GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION Analyst: H. QIAN Analysis Date: 12-FEB-96 Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311	Instrument: CVAA .0 P107.1.0 Result BDL 0.01 -0.00025 0.0106 1 ON SW846-3510B	Det. Limit 0.005	Units mg/L mg/L Conc Conc
MERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: I. NOHA Analysis Date: 14-FEB-96  Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131.9  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311  Parameter  MERCURY  ADDITION 1  SAMPLE SAMPLE + ADD 1  DILUTION  GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION  Analyst: H. QIAN Analysis Date: 12-FEB-96  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311  Parameter  INITIAL WEIGHT OR VOLUME  FINAL VOLUME	Instrument: CVAA .0 P107.1.0  Result BDL 0.01 -0.00025 0.0106 1  DN SW846-3510B  P107.1.0  Result 200 1  ISTIC) SW846-8270B Instrument: GC/MS SVOA	Det. Limit 0.005	Units mg/L mg/L Conc Conc Units mL mL
MERCURY CVAA (1 POINT MSA) SW846-7470A  Analysis Date: 14-FEB-96 Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131.9 Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311  Parameter  MERCURY  ADDITION 1  SAMPLE SAMPLE + ADD 1  DILUTION  GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION  Analyst: H. GIAN Analysis Date: 12-FEB-96 Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311  Parameter  INITIAL WEIGHT OR VOLUME  FINAL VOLUME  TCLP SEMIVOLATILE ORGANICS (TOXICITY CHARACTER)  Analyst: H. GIAN Analysis Date: 13-FEB-96 14:04 Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-35 Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311  Parameter	Instrument: CVAA .0 P107.1.0  Result BDL 0.01 -0.00025 0.0106 1  DN SW846-3510B  P107.1.0  Result 200 1  ISTIC) SW846-8270B Instrument: GC/MS SVOA	Det. Limit 0.005	Units mg/L mg/L Conc Conc Units mL mL
MERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: I. NOHA Analysis Date: 14-FEB-96 Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131.9 Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311  Parameter  MERCURY  ADDITION 1  SAMPLE SAMPLE + ADD 1  DILUTION  GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION Analyst: H. GIAN Analysis Date: 12-FEB-96 Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311  Parameter  INITIAL WEIGHT OR VOLUME FINAL VOLUME  TCLP SEMIVOLATILE ORGANICS (TOXICITY CHARACTER) Analyst: H. GIAN Analysis Date: 13-FEB-96 14:04 Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-35 Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311  Parameter  1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	Instrument: CVAA .0 P107.1.0  Result BDL 0.01 -0.00025 0.0106 1  DN SW846-3510B  P107.1.0  Result 200 1  ISTIC) SW846-8270B Instrument: GC/MS SVOA 10B P233.4.0 P107.1.0	Det. Limit 0.005  Test: P233.4.0  Det. Limit  Det. Limit	Units mg/L mg/L Conc Conc Units mL mL
MERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: I. NOHA Analysis Date: 14-FEB-96  Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131.9  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311  Parameter  MERCURY  ADDITION 1  SAMPLE  SAMPLE + ADD 1  DILUTION  GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION  Analyst: H. GIAN Analysis Date: 12-FEB-96  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311  Parameter  INITIAL WEIGHT OR VOLUME  FINAL VOLUME  TCLP SEMIVOLATILE ORGANICS (TOXICITY CHARACTER)  Analyst: H. GIAN Analysis Date: 13-FEB-96 14:04  Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-35  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311  Parameter  1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	Instrument: CVAA .0 P107.1.0  Result BDL 0.01 -0.00025 0.0106 1  DN SW846-3510B  P107.1.0  Result 200 1  ISTIC) SW846-8270B Instrument: GC/MS SVOA 10B P233.4.0 P107.1.0  Result	Det. Limit 0.005  Test: P233.4.0  Det. Limit  Det. Limit 50	Units mg/L mg/L Conc Conc  Units mL  Units ug/L
MERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: T. NOHA Analysis Date: 14-FEB-96  Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131.9  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311  Parameter  MERCURY  ADDITION 1  SAMPLE SAMPLE + ADD 1  DILUTION  GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION  Analyst: H. GIAN Analysis Date: 12-FEB-96  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311  Parameter  INITIAL WEIGHT OR VOLUME  FINAL VOLUME  TCLP SEMIVOLATILE ORGANICS (TOXICITY CHARACTER)  Analyst: H. GIAN Analysis Date: 13-FEB-96 14:04  Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-35  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311  Parameter  1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)  2,4-DINITROTOLUENE  HEXACHLOROBENZENE	Instrument: CVAA .0 P107.1.0  Result BDL 0.01 -0.00025 0.0106 1  DN SW846-3510B  P107.1.0  Result 200 1  ISTIC) SW846-8270B Instrument: GC/MS SVOA 108 P233.4.0 P107.1.0  Result BDL BDL BDL BDL	Det. Limit 0.005  Test: P233.4.0  Det. Limit  Test: 0514	Units mg/L mg/L Conc Conc  Units mL mL ug/L ug/L
MERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: T. NOHA Analysis Date: 14-FEB-96  Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131.9  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311  Parameter  MERCURY  ADDITION 1  SAMPLE SAMPLE + ADD 1  DILUTION  GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION  Analyst: H. GIAN Analysis Date: 12-FEB-96  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311  Parameter  INITIAL WEIGHT OR VOLUME  FINAL VOLUME  TCLP SEMIVOLATILE ORGANICS (TOXICITY CHARACTER)  Analyst: H. GIAN Analysis Date: 13-FEB-96 14:04  Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-35  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311  Parameter  1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)  2,4-DINITROTOLUENE  HEXACHLOROBENZENE	Instrument: CVAA .0 P107.1.0  Result BDL 0.01 -0.00025 0.0106 1  DN SW846-3510B  P107.1.0  Result 200 1  ISTIC) SW846-8270B Instrument: GC/MS SVOA 10B P233.4.0 P107.1.0  Result BDL	Det. Limit 0.005  Test: P233.4.0  Det. Limit  Test: 0514  Det. Limit 50 50 50	Units mg/L mg/L Conc Conc  Units mL mL ug/L ug/L ug/L
MERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: I. NOHA Analysis Date: 14-FEB-96 Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131.9 Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311  Parameter  MERCURY  ADDITION 1  SAMPLE SAMPLE + ADD 1  DILUTION  GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION Analyst: H. QIAN Analysis Date: 12-FEB-96 Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311  Parameter  INITIAL WEIGHT OR VOLUME FINAL VOLUME  TCLP SEMIVOLATILE ORGANICS (TOXICITY CHARACTER) Analyst: H. QIAN Analysis Date: 13-FEB-96 14:04 Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-35- Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311  Parameter  1,4-DICHLOROBENZENE (P-DICHLOROBENZENE) 2,4-DINITROTOLUENE	Instrument: CVAA .0 P107.1.0  Result BDL 0.01 -0.00025 0.0106 1  ON SW846-3510B  P107.1.0  Result 200 1  ISTIC) SW846-8270B Instrument: GC/MS SVOA 108 P233.4.0 P107.1.0  Result BDL BDL BDL BDL BDL BDL	Det. Limit 0.005  Test: P233.4.0  Det. Limit  Test: 0514  Det. Limit 50 50 50 50 50	Units mg/L mg/L Conc Conc  Units mL ML ug/L ug/L

Paramet	ter	Result	Det. Limit	Units
PYRIDINE	· · · · · · · · · · · · · · · · · · ·	BDL	250	ug/L
2-METHYLPHENOL (O-CRESC				ug/L
3-METHYLPHENOL (M-CRESC		BDL	130	ug/L
4-METHYLPHENOL (P-CRESC	JL)	DUL	130	ug/L
PENTACHLOROPHENOL		BDL	250	ug/L
2,4,5-TRICHLOROPHENOL	u similari	BDL	130	1
2,4,6-TRICHLOROPHENOL		BDL	130	ug/L
SURROGATE RECOVERY				
SURRUGATE RECUVERT	<u> </u>	, uma		
2-FI LIOROPHENOI		59	"	% Rec
PHENOL - D5		50		% Rec
NITROBENZENE-D5		82		% Rec
	mast Till		# te wife	% Rec
2,4,6-TRIBROMOPHENOL		82	.	% Rec
TERPHENYL-D14		94		% Rec
7 7 117 11		<u> </u>		

1:1 dilution

3 & 4 Methyl Phenol co-elute so identification is tentative.

ZERO HEADSPACE EXTRACTION (TCLP) SW846-1311 Analyst: T. MCDEVITT, JR. Analysis Date: 09-FEB-96		Test: P108.1.0	
Parameter	Result	Det. Limit	Units
TOTAL SAMPLE WEIGHT	25.0		Grams
LIQUID FRACTION (GRAMS)	NA HELITA HAR		Grams
LIQUID PORTION	NA NA		mL
EXTRACTED SAMPLE	25.0		Grams
PHASE O VOLUME (REP 0)	498		mL
PHASE 1 VOLUME (REP 1)	NA:		mL
FINAL PH	6.02		Std. Units

TCLP VOLATILE ORGANICS (TOXICITY CHARACTERIST) Analyst: G. SWANEY Analysis Date: 12-FEB-96 14:1		VOA	Test: 05	13.3.0
Prep: ZERO HEADSPACE EXTRACTION (TCLP) SW846-1311 P108.1.0		n er spripsede i j n i skanne eeu	20 x 3	
Parameter	Result		Det. Limit	Units
BENZENE	BDL		50	ug/L
CARBON TETRACHLORIDE	BDL	N	50	
CHLOROBENZENE	BDL		50	
CHLOROFORM	BDL		50	
1,2-DICHLOROETHANE	BDL		50	
I, I-DICHLOROETHYLENE	BDL		50	
MÉTHYL ETHYL KETONE	BDL		100	1 3/
TETRACHLOROETHYLENE	BDL		50	
TRICHLOROETHYLENE	BDL		50	
VINYL CHLORIDE	BDL		100	
SURROGATE RECOVERY			r	
DICHLOROETHANE-D4	. 99			% Rec
TOLUENE-D8	98			% Rec
1-BROMOFLUOROBENZENE	96	- Taylar 1		% Rec

SONICATION EXTRACTION FOR ORGANICS SW846-3550( Analyst: S. BUSSEY Analysis Date: 13-FEB-96	MOD)	Test: P231.1.(	
Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	30.4		Grams
FINAL VOLUME	10 (##1777)		mL

Prep: SONICATION EXTRACTION	FOR ORGANICS SW846-355	50(MOD) P231.1.0	Test: 0301.2.	
Para	meter	Result	Det. Limit	Units
CB AROCHLOR 1016		BDL	0.033	mg/kg
CB AROCHLOR 1221		BDL	0.033	mg/kg
CB AROCHLOR 1232		BDL	0.033	mg/kg
CB AROCHLOR 1242		: AMBDL: AMA	0.033	mg/kg
CB AROCHLOR 1248		BDL	0.033	mg/kg
CB AROCHLOR 1254		* 0.049	0.033	mg/kg
CB AROCHLOR 1260		0.045	0.033	mg/kg
CB AROCHLOR 1262			0.033	mg/kg

Sample Comments

\* See Note for Parameter BDL Below Detection Limit NA Not Applicable

This Certificate shall not be reproduced, except in full, without the written approval of the lab.

Approved

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC.	09-FEB-96		C175477
COMMERCIAL LABORATORY OPERATIONS	Complete	PO N	lumber
1319 MARQUETTE DRIVE	22-FEB-96	E & E	
ROMEOVILLE, IL 60441	Printed	Samp	led
(708)378-1600	22-FEB-96	08-FEB-9	6 10:25

Report To

Bill To

D. HENDREN ECOLOGY & ENVIRONMENT, INC. 77 WEST JACKSON BOULEVARD CHICAGO, IL 60604

ACCOUNTS PAYABLE ECOLOGY & ENVIRONMENT, INC. 111 WEST JACKSON BLVD. (12TH FLOOR) CHICAGO, IL 60604

Sample Description

CLIENT ID: PIT 3 ANALYTICAL TDD: S05-9602-803 SAMPLE I.D.: KOS-PIT 3 COMPOSITE

Analyst: C. HERRO Analysis Date: 09-FEB-96	· · · · · · · · · · · · · · · · · · ·		Test: P107.1	<del></del>
Parameter		esul t	Det. Limit	Units
TOTAL SAMPLE WEIGHT	100.0			Grams
LIQUID FRACTION (GRAMS)	0			Grams
EXTRACTED SAMPLE	100.0			Grams
SOLIDS.	100			Percent
9.5 MM SIEVE TEST				Passed
INITIAL PH	9.03			Std. Units
ADJUSTED PH	1.58			Std. Units
BUFFER SOLUTION PH	4.93			Std. Units
FINAL PH	5.76			Std. Units
VOLUME BUFFERED SOLUTION	2000			mL
VOLUME EXTRACT FILTERED	2000			mL
VOLUME LIQUID (ADD BACK)	0			mL
TOTAL VOLUME FILTRATE	2000			mL
AMBIENT TEMPERATURE	21			Degrees C
INITIAL TIME	05.30			HRŠ
FINAL TIME	09.30			HRS
PHASE O VOLUME (REP 0) PHASE O WEIGHT	NA			mL
	NA		\	Grams
PHASE O DENSITY	NA NA			g/mL
PHASE 1 VOLUME (REP 1)	NA:		· .	mL
PHASE 1 WEIGHT	NA			Grams
PHASE 1 DENSITY	NA			g/mL

FAA OR ICP ACID DIGESTION (LEACHATE) SW846-301 Analyst: C. HERRO Analysis Date: 12-FEB-96 Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131	The second of th	Test: P130.8.	Ö
Parameter INITIAL WEIGHT OR VOLUME FINAL VOLUME	Result 50 50	Det. Limit	Units ML ML

HERITAGE ENVIRONMENTAL SERVICES, INC.		Samp i e	ID: CI	/54// PII
ARSENIC ICP (1 POINT MSA) SW846-6010A Analyst: C. HERRO Analysis Date: 12-FEB-96-23:3	0 Instrument: 1CP		Test: M60	3.7.0
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8. Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131	1 P107.1.0			
Parameter	Result	Det.	Limit	Units
ADSENTA	BDL		0.05	mg/L
ADDITION 1				mg/L
SAMPLE	0.0192			Conc
SAMPLE + ADD 1	0.9856			Conc
DILUTION	1	·		.00110
		add: 50 p. 1		100.1
BARIUM ICP (1 POINT MSA) SW846-6010A				ii Canan
Analyst: C. HERRO Analysis Date: 12-FEB-96 23:3	U Instrument: ICP		Test: M604	+ , <i>f</i> , U
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.			+ 9,7000,000 + 475,466	
Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131	1 P107.1.0		* * * * * * * * * * * * * * * * * * * *	<u> </u>
Parameter	Result	Det.	Limit	Units
BARIUM	BDL	1	2.0	
ADDITION 1	1.0			mg/L
SAMPLE	0.7948			Conc
SAMPLE + ADD 1	1.748	1.50	*1.1.1. * ; * *	Conc
DILUTION	1			
CADMIUM ICP (1 POINT MSA) SW846-6010A  Analyst: C. HERRO Analysis Date: 12-FEB-96 23:3  Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131	0 Instrument: ICP 0	**************************************	Test: M608	
Parameter	Result	Det.	Limit	Units
CADMIUM	0.010		0.005	J/
ADDITION 1	1.0	- 1	/	mg/L
SAMPLE	0.0100			Conc
	0.9416	447		Conc
DILUTION	1			
CHROMIUM ICP (1 POINT MSA) SW846-6010A		1,100		. 11. 14.
Analyst: C. HERRO Analysis Date: 12-FEB-96 23:3	O Instrument: ICP		Test: M610	0.7.0
Analyst: C. HERRO Analysis Date: 12-FEB-96 23:3 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.	O 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		··	
Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131				
Parameter	Result	·····	Limit	Units
CHROMIUM	BDL		0.01	mg/L
ADDITION 1	· ···1.0		: .	mg/L
SAMPLE	-0.0024			Conc
SAMPLE + ADD VI	0.9592	. 1	· ·	Conc
DILUTION	1			
LEAD ICP (1 POINT MSA) SW846-6010A  Analyst: C. HERRO Analysis Date: 12-FEB-96 23:3  Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131		. N Walana	Test: M616	
Parameter	Result	Det_	Limit	Units
LEAD	0.07		0.05	mg/L
ADDITION 1	1.0		2.03	
SAMPLE	0.759	ľ		mg/L
CAMPLE AND 1	•			Conc
DILUTION	1.022			Conc
111111111111	1 <b>I</b>	1		

HERITAGE ENVIRONMENTAL SERVICES, INC.	<del> </del>	The state of the s	title to the second of the
SELENIUM ICP (1 POINT MSA) SW846-6010A			
Analyst: C. HERRO Analysis Date: 12-FEB-96 23:	30 Instrument: ICP	Test: M628	3.7.0
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8	3.0	TANDER TO THE TOTAL OF THE TOTA	
Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13	311 P107.1.0		
Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.10	mg/L
NDDITION 1	1.0	A 7 8 6 7 7 1	mg/L
	=	1	Conc
SAMPLE	0.0075		l a a
SAMPLE + ADD 1	1.040		Conc
DILUTION			
	V-1	The state of the s	
SILVER ICP (1 POINT MSA) SW846-6010A		1.01	2.5
Analyst: C. HERRO Analysis Date: 12-FEB-96 23:	30 Instrument: ICP	Test: M63	0.7.0
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8		General State of the State of t	
Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13	311 P107.1.0		
Parameter	Result	Det. Limit	Units
SILVER	BDL	0.02	mg/L
	100	3.02	mg/L
ADDITION 1			
SAMPLE	0.0045		Conc
SAMPLE + ADD I	0.8276	.   "	Conc
DILUTION	1	1	L
			77770
IERCURY CVAA ACID DIGESTION (LEACHATE) SW846-			. 34
Analyst: T. NOHA Analysis Date: 12-FEB-96		Test: P131.9.0	)
Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1	311 P107.1.0	1.000 - 1.000	and the large
Parameter	Result	Det. Limit	Units
NITIAL WEIGHT OR VOLUME	10 Result	Dec. Limit	mL
	10	1	IIIL
TNAL VALUAT ''	- hanina a second		
INAL VOLUME  SERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: T. NOHA Analysis Date: 14-FEB-96  Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P13	Instrument: CVAA	Test: M620.6.0	mL
HERCURY CVAA (1 POINT MSA) SW846-7470A Analysis Date: 14-FEB-96	Instrument: CVAA	Test: M620.6.(	
IERCURY CVAA (1 POINT MSA) SW846-7470A Analyst: T. NOHA Analysis Date: 14-FEB-96 Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P13	Instrument: CVAA	Test: M620.6.	
IERCURY CVAA (1 POINT MSA) SW846-7470A Analyst: T. NOHA Analysis Date: 14-FEB-96 Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P13* Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13* Parameter	Instrument: CVAA 1.9.0 311 P107,1.0 Result	Det. Limit	) Units
IERCURY CVAA (1 POINT MSA) SW846-7470A Analyst: T. NOHA Analysis Date: 14-FEB-96 Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P13' Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13 Parameter IERCURY	Instrument: CVAA 1.9.0 311 P107:1.0 Result BDL	Det. Limit 0.005	Units mg/L
IERCURY CVAA (1 POINT MSA) SW846-7470A Analyst: T. NOHA Analysis Date: 14-FEB-96 Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P13' Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13 Parameter MERCURY ADDITION 1	Instrument: CVAA 1.9.0 311 P107.1.0  Result BDL 0.01	Det. Limit	Units mg/L mg/L
MERCURY CVAA (1 POINT MSA) SW846-7470A Analyst: T. NOHA Analysis Date: 14-FEB-96 Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P13' Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13 Parameter MERCURY	Instrument: CVAA 1.9.0 311 P107:1.0  Result BDL 0.01 -0.003	Det. Limit 0.005	Units mg/L mg/L Conc
MERCURY CVAA (1 POINT MSA) SW846-7470A Analyst: T. NOHA Analysis Date: 14-FEB-96 Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P13* Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13  Parameter MERCURY ADDITION 1 SAMPLE SAMPLE SAMPLE + ADD 1	Instrument: CVAA 1.9.0 311 P107.1.0  Result BDL 0.01	Det. Limit 0.005	Units mg/L mg/L
MERCURY CVAA (1 POINT MSA) SW846-7470A Analyst: T. NOHA Analysis Date: 14-FEB-96 Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P13' Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13 Parameter MERCURY	Instrument: CVAA 1.9.0 311 P107:1.0  Result BDL 0.01 -0.003	Det. Limit 0.005	Units mg/L mg/L Conc
IERCURY CVAA (1 POINT MSA) SW846-7470A Analyst: T. NOHA Analysis Date: 14-FEB-96 Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P13 Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13 Parameter MERCURY ADDITION 1 SAMPLE SAMPLE + ADD 1	Instrument: CVAA 1.9.0 811 P107:1.0 Result BDL 0.01 -0.003 0.0095 1	Det. Limit 0.005	Units mg/L mg/L Conc
MERCURY CVAA (1 POINT MSA) SW846-7470A Analyst: T. NOHA Analysis Date: 14-FEB-96 Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P13' Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13 Parameter MERCURY ADDITION 1 SAMPLE SAMPLE + ADD 1 DILUTION GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACT	Instrument: CVAA 1.9.0 311 P107:1.0  Result BDL 0.01 -0.003 0.0095 1	Det. Limit 0.005	Units mg/L mg/L Conc Conc
IERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: T. NOHA Analysis Date: 14-FEB-96 Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P13' Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13 Parameter  MERCURY  ADDITION 1  SAMPLE  SAMPLE SAMPLE + ADD 1  DILUTION  GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACT  Analysis Date: 12-FEB-96	Instrument: CVAA 1.9.0 311 P107:1.0  Result BDL 0.01 -0.003 0.0095 1	Det. Limit 0.005	Units mg/L mg/L Conc Conc
MERCURY CVAA (1 POINT MSA) SW846-7470A Analyst: T. NOHA Analysis Date: 14-FEB-96 Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P13' Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13 Parameter MERCURY ADDITION 1 SAMPLE SAMPLE + ADD 1 DILUTION GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACT	Instrument: CVAA 1.9.0 311 P107:1.0  Result BDL 0.01 -0.003 0.0095 1	Det. Limit 0.005	Units mg/L mg/L Conc Conc
MERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: T. NOHA Analysis Date: 14-FEB-96  Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P13*  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13*  Parameter  MERCURY  ADDITION 1  SAMPLE SAMPLE + ADD 1  DILUTION  GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACT  Analyst: H. QIAN Analysis Date: 12-FEB-96  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13*  Parameter	Instrument: CVAA 1.9.0 311 P107:1.0  Result BDL 0.01 -0.003 0.0095 1	Det. Limit 0.005	Units mg/L mg/L Conc Conc
MERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: T. NOHA Analysis Date: 14-FEB-96  Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P13*  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13*  Parameter  MERCURY  ADDITION 1  SAMPLE SAMPLE + ADD 1  DILUTION  GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACT  Analyst: H. QIAN Analysis Date: 12-FEB-96  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13*  Parameter	Instrument: CVAA 1.9.0 311 P107.1.0  Result BDL 0.01 -0.003 0.0095 1  ION SW846-3510B  311 P107.1.0  Result	Det. Limit	Units mg/L mg/L Conc Conc
IERCURY CVAA (1 POINT MSA) SW846-7470A Analyst: T. NOHA Analysis Date: 14-FEB-96 Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P13' Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13 Parameter  MERCURY ADDITION 1 SAMPLE SAMPLE + ADD 1 DILUTION  GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACT Analyst: H. QIAN Analysis Date: 12-FEB-96 Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13 Parameter  NITIAL WEIGHT OR VOLUME	Instrument: CVAA 1.9.0 311 P107.1.0  Result BDL 0.01 -0.003 0.0095 1	Det. Limit	Units mg/L mg/L Conc Conc
MERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: T. NOHA Analysis Date: 14-FEB-96  Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P13*  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13*  Parameter  MERCURY  ADDITION 1  SAMPLE SAMPLE + ADD 1  DILUTION  GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACT  Analyst: H. QIAN Analysis Date: 12-FEB-96  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13*  Parameter	Instrument: CVAA 1.9.0 311 P107.1.0  Result BDL 0.01 -0.003 0.0095 1  ION SW846-3510B  311 P107.1.0  Result	Det. Limit	Units mg/L mg/L Conc Conc
IERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: T. NOHA Analysis Date: 14-FEB-96 Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P13: Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13  Parameter  MERCURY  MDDITION 1  MAMPLE  MAMPLE  MAMPLE + ADD 1  DILUTION  MC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACT  Analyst: H. QIAN Analysis Date: 12-FEB-96  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13  Parameter  NITIAL WEIGHT OR VOLUME  INAL VOLUME	Instrument: CVAA 1.9.0 311 P107.1.0  Result BDL 0.01 -0.003 0.0095 1  ION SW846-3510B  Result 200 1	Det. Limit 0.005  Test: P233.4.0  Det. Limit	Units mg/L mg/L Conc Conc
MERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: T. NOHA Analysis Date: 14-FEB-96 Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P13: Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13  Parameter  MERCURY  MDDITION 1  SAMPLE  SAMPLE + ADD 1  DILUTION  MC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACT  Analyst: H. QIAN Analysis Date: 12-FEB-96 Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13  Parameter  NITIAL WEIGHT OR VOLUME  INAL VOLUME  CLP SEMIVOLATILE ORGANICS (TOXICITY CHARACTE	Instrument: CVAA 1.9.0 311 P107.1.0  Result BDL 0.01 -0.003 0.0095 1  ION SW846-3510B  RISTIC) SW846-8270B	Det. Limit 0.005  Test: P233.4.	Units mg/L mg/L Conc Conc
MERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: T. NOHA Analysis Date: 14-FEB-96 Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P13: Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13  Parameter  MERCURY  MODITION 1  SAMPLE  SAMPLE + ADD 1  DILUTION  AC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACT  Analyst: H. QIAN Analysis Date: 12-FEB-96  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13  Parameter  NITIAL WEIGHT OR VOLUME  INAL VOLUME  TCLP SEMIVOLATILE ORGANICS (TOXICITY CHARACTE  Analyst: H. QIAN Analysis Date: 13-FEB-96-14:	Instrument: CVAA 1.9.0 311 P107.1.0  Result BDL 0.01 -0.003 0.0095 1  ION SW846-3510B  S11 P107.1.0  Result 200 1  RESULT COMMERCE SW846-8270B 45 Instrument: GC/MS SVOA	Det. Limit 0.005  Test: P233.4.	Units mg/L mg/L Conc Conc
MERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: T. NOHA Analysis Date: 14-FEB-96 Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P13: Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13  Parameter  MERCURY  MDDITION 1  SAMPLE SAMPLE + ADD 1  DILUTION  AC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACT Analyst: H. QIAN Analysis Date: 12-FEB-96 Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13  Parameter  NITIAL WEIGHT OR VOLUME  INAL VOLUME  TCLP SEMIVOLATILE ORGANICS (TOXICITY CHARACTE Analyst: H. QIAN Analysis Date: 13-FEB-96 14: Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-14:	Instrument: CVAA  1.9.0  311 P107.1.0  Result  BDL  0.01  -0.003  0.0095  1  ION SW846-3510B  311 P107.1.0  Result  200  1  CRISTIC) SW846-8270B  45 Instrument: GC/MS SVOA -3510B P233.4.0	Det. Limit 0.005  Test: P233.4.	Units mg/L mg/L Conc Conc
IERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: T. NOHA Analysis Date: 14-FEB-96 Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P13: Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13  Parameter  IERCURY IDDITION 1 ISAMPLE ISAMPLE + ADD 1 IDILUTION  IC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACT Analyst: H. QIAN Analysis Date: 12-FEB-96 Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13  Parameter  NITIAL WEIGHT OR VOLUME  INAL VOLUME  INAL VOLUME  CLP SEMIVOLATILE ORGANICS (TOXICITY CHARACTE Analyst: H. QIAN Analysis Date: 13-FEB-96 14: Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-	Instrument: CVAA  1.9.0  311 P107.1.0  Result  BDL  0.01  -0.003  0.0095  1  ION SW846-3510B  311 P107.1.0  Result  200  1  CRISTIC) SW846-8270B  45 Instrument: GC/MS SVOA -3510B P233.4.0	Det. Limit 0.005  Test: P233.4.(  Det. Limit	Units mg/L mg/L Conc Conc
MERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: T. NOHA Analysis Date: 14-FEB-96  Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P13-  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13  Parameter  MERCURY  ADDITION 1  SAMPLE SAMPLE + ADD 1  DILUTION  MC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACT  Analysi: H. QIAN Analysis Date: 12-FEB-96  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13  Parameter  NITIAL WEIGHT OR VOLUME  INAL VOLUME  CLP SEMIVOLATILE ORGANICS (TOXICITY CHARACTE  Analysi: H. QIAN Analysis Date: 13-FEB-96 14:  Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-13  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13  Parameter	Instrument: CVAA 1.9.0 311 P107.1.0  Result BDL 0.01 -0.003 0.0095 1  ION SW846-3510B  S11 P107.1.0  Result 200 1  Result 200 1  Result 210 Result 210 Result 211 P107.1.0  Result 211 P107.1.0  Result 211 P107.1.0  Result 311 P107.1.0	Det. Limit 0.005  Test: P233.4.	Units mg/L mg/L Conc Conc
MERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: T. NOHA Analysis Date: 14-FEB-96  Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P13-  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13  Parameter  MERCURY  ADDITION 1  SAMPLE SAMPLE + ADD 1  DILUTION  GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACT  Analyst: H. QIAN Analysis Date: 12-FEB-96  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13  Parameter  NITIAL WEIGHT OR VOLUME  INAL VOLUME  CLP SEMIVOLATILE ORGANICS (TOXICITY CHARACTE  Analyst: H. QIAN Analysis Date: 13-FEB-96 14:  Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-12  Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-12  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-12	Instrument: CVAA 1.9.0 311 P107.1.0  Result BDL 0.01 -0.003 0.0095 1  ION SW846-3510B  S11 P107.1.0  Result 200 1	Det. Limit 0.005  Test: P233.4.0  Det. Limit  Test: 0514	Units mg/L mg/L Conc Conc Units mL ml
MERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: T. NOHA  Analysis Date: 14-FEB-96  Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P13-  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13  Parameter  MERCURY  ADDITION 1  SAMPLE  SAMPLE + ADD 1  DILUTION  MC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACT  Analyst: H. QIAN  Analysis Date: 12-FEB-96  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13  Parameter  NITIAL WEIGHT OR VOLUME  INAL VOLUME  CLP SEMIVOLATILE ORGANICS (TOXICITY CHARACTE  Analyst: H. QIAN  Analysis Date: 13-FEB-96 14:  Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-13  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13  Parameter  , 4-DICHLOROBENZENE (P-DICHLOROBENZENE)	Instrument: CVAA 1.9.0 311 P107.1.0  Result  BDL 0.01 -0.003 0.0095 1  ION SW846-3510B  S11 P107.1.0  Result 200 1  ERISTIC) SW846-8270B 45 Instrument: GC/MS SVOA -3510B P233.4.0 511 P107.1.0  Result BDL	Det. Limit 0.005  Test: P233.4.0  Det. Limit  Test: 0514	Units mg/L mg/L Conc Conc Units mL ml
MERCURY CVAA (1 POINT MSA) SW846-7470A Analyst: T. NOHA Analyst: Date: 14-FEB-96 Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P13- Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13  Parameter  MERCURY ADDITION 1 SAMPLE SAMPLE + ADD 1 DILUTION  MC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACT Analyst: H. QIAN Analysis Date: 12-FEB-96 Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13  Parameter  NITIAL WEIGHT OR VOLUME INAL VOLUME  CCLP SEMIVOLATILE ORGANICS (TOXICITY CHARACTE Analyst: H. QIAN Analysis Date: 13-FEB-96 14: Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-13  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13  Parameter  ,4-DICHLOROBENZENE (P-DICHLOROBENZENE)  ,4-DINITROTOLUENE	Instrument: CVAA 1.9.0 311 P107.1.0  Result BDL 0.01 -0.003 0.0095 1  ION SW846-3510B  311 P107.1.0  Result 200 1  RISTIC) SW846-8270B 45 Instrument: GC/MS SVOA 3510B P233.4.0 311 P107.1:0  Result BDL BDL BDL	Det. Limit 0.005  Test: P233.4.0  Det. Limit 50 50	Units mg/L mg/L Conc Conc  Units mL  Units ug/L ug/L
MERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: T. NOHA  Analysis Date: 14-FEB-96  Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P13'  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13  Parameter  MERCURY  MDDITION 1  SAMPLE SAMPLE + ADD 1  DILUTION  GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACT  Analyst: H. QIAN  Analysis Date: 12-FEB-96  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13  Parameter  NITIAL WEIGHT OR VOLUME  TNAL VOLUME  CLP SEMIVOLATILE ORGANICS (TOXICITY CHARACTE  Analyst: H. QIAN  Analysis Date: 13-FEB-96 14:  Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-12  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-12  Parameter  , 4-DICHLOROBENZENE (P-DICHLOROBENZENE)  LXACHLOROBENZENE	Instrument: CVAA 1.9.0 311 P107.1.0  Result BDL 0.01 -0.003 0.0095 1  ION SW846-3510B  S11 P107.1.0  Result 200 1  Result 200 1  Result 201 Result BDL BDL BDL BDL BDL BDL	Det. Limit	Units mg/L mg/L Conc Conc Units mL mL units ug/L ug/L ug/L ug/L
MERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: T. NOHA Analysis Date: 14-FEB-96 Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P13' Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13  Parameter  MERCURY  MDDITION 1  SAMPLE SAMPLE + ADD 1  DILUTION  GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACT Analyst: H. QIAN Analysis Date: 12-FEB-96 Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13  Parameter  NITIAL WEIGHT OR VOLUME  INAL VOLUME  CLP SEMIVOLATILE ORGANICS (TOXICITY CHARACTE Analyst: H. QIAN Analysis Date: 13-FEB-96 14: Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-12  Parameter  Analyst: H. QIAN Analysis Date: 13-FEB-96 14: Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-12  Parameter  ,4-DICHLOROBENZENE (P-DICHLOROBENZENE) ,4-DINITROTOLUENE  EXACHLOROBENZENE  EXACHLOROBENZENE  EXACHLOROBENZENE	Instrument: CVAA 1.9.0 311 P107.1.0  Result BDL 0.01 -0.003 0.0095 1  ION SW846-3510B  S11 P107.1.0  Result 200 1  RESULT 200 1  RESULT BDL	Det. Limit	Units mg/L mg/L Conc Conc  Units mL mL ug/L ug/L ug/L ug/L
MERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: T. NOHA  Analysis Date: 14-FEB-96  Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P13'  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13  Parameter  MERCURY  MDDITION 1  SAMPLE SAMPLE + ADD 1  DILUTION  GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACT  Analyst: H. QIAN  Analysis Date: 12-FEB-96  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13  Parameter  NITIAL WEIGHT OR VOLUME  TNAL VOLUME  CLP SEMIVOLATILE ORGANICS (TOXICITY CHARACTE  Analyst: H. QIAN  Analysis Date: 13-FEB-96 14:  Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-12  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-12  Parameter  , 4-DICHLOROBENZENE (P-DICHLOROBENZENE)  LXACHLOROBENZENE	Instrument: CVAA 1.9.0 311 P107.1.0  Result BDL 0.01 -0.003 0.0095 1  ION SW846-3510B  S11 P107.1.0  Result 200 1  Result 200 1  Result 201 Result BDL BDL BDL BDL BDL BDL	Det. Limit 0.005  Test: P233.4.0  Det. Limit 50 50 50 50 50 50	Units mg/L mg/L Conc Conc Units mL mL ug/L ug/L ug/L

DVDIDING			1	1
PYRIDINE CONTROL (O. CRECOL)	BDL		250	ug/L
2-METHYLPHENOL (O-CRESOL) 3-METHYLPHENOL (M-CRESOL)	BDL BDL		130 130	ug/L ug/L
4-METHYLPHENOL (P-CRESOL)	BDL		130	ug/L ug/L
PENTACHLOROPHENOL	BDL		250	ug/L
2,4,5-TRICHLOROPHENOL		-	130	ug/L
2,4,6-TRICHLOROPHENOL	BDL		130	ug/L
SURROGATE RECOVERY				
2-FLUOROPHENOL	54		F '	% Rec
PHENOL -D5	46		.: ···:	% Rec
NITROBENZENE-D5	75			% Rec
2-FLUOROBIPHENYL	75	:	 	% Rec
2,4,6-TRIBROMOPHENOL	83			% Rec
TERPHENYL-D14	95			% Rec

1:1 dilution
3 & 4 Methyl Phenol co-elute so identification is tentative.

ZERO HEADSPACE EXTRACTION (TCLP) SW846-1311 Analyst: T. MCDEVITT, JR. Analysis Date: 09-FEB-96		Test: P108.1.	0
Parameter	Result	Det. Limit	Units
TOTAL SAMPLE WEIGHT	25.5		Grams
LIQUID FRACTION (GRAMS)	NA	• •	Grams
LIQUID PORTION	NA		mL
EXTRACTED SAMPLE	25.5	 +14	Grams
PHASE O VOLUME (REP O)	493		mL
PHASE 1 VOLUME (REP 1)	NA	 	mL
FINAL PH	5.71		Std. Unit

Analysis Date: 12-FEB-96 14:4 Prep: ZERO HEADSPACE EXTRACTION (TCLP) SW846-1311 P108.1.0	/ Instrument: G	C/MS VOA	Test: 051	3.3.0
Parameter	Result		Det. Limit	Units
BENZENE	BDL		50	ug/L
CARBON TETRACHLORIDE	BDL		50	ug/L
CHLOROBENZENE	BDL		50	ug/L
CHLOROFORM	BDL	· 1	50	ug/L
1,2-DICHLOROETHANE	BDL		50	ug/L
1,1-DICHLOROETHYLENE	BDL		50	ug/L
MÉTHYL ETHYL KETONE	BDL		100	ug/L
TETRACHLOROETHYLENE	BDL		50	ug/L
TRICHLOROETHYLENE	BDL	1	50	ug/L
VINYL CHLORIDE	BDL		100	ug/L
SURROGATE RECOVERY				
DICHLOROETHANE-D4	85			% Rec
TOLUENE-D8	98	· · ·	• ••	% Rec
4-BROMOFLUOROBENZENE	0.7		1	% Rec

SONICATION EXTRACTION FOR ORGANICS SW846-3550 Analyst: S. BUSSEY Analysis Date: 13-FEB-96	(MOD)	11 11 12 12 12 12 12 12 12 12 12 12 12 1	Test: P231.1.0	
Parameter	Result		Det. Limit	Units
INITIAL WEIGHT OR VOLUME	30.7	į		Grams
FINAL VOLUME	. 10			mL

Analyst: S. BUSSEY Analysis Date: 13-FEB-96 Prep: SONICATION EXTRACTION FOR ORGANICS SW846-3550(MOD)		Test: 0301.2.0
Parameter	Result	Det. Limit Units
PCB AROCHLOR 1016	BDL	0.017 mg/kg
PCB AROCHLOR 1221	BDL	0.017 mg/kg
PCB AROCHLOR 1232	BDL	0.017 mg/kg
PCB AROCHLOR 1242	BDL	0.017 mg/kg
PCB AROCHLOR 1248	BDL	0.017 mg/kg
PCB AROCHLOR 1254	* 0.050	0.017 mg/kg
PCB AROCHLOR 1260	0.026	0.017 mg/kg
PCB AROCHLOR 1262	BDL	0.017 mg/kg

Sample Comments

\* See Note for Parameter BDL Below Detection Limit NA Not Applicable

This Certificate shall not be reproduced, except in full, without the written approval of the lab.

Approved

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC.	09-FEB-96_		C175478
COMMERCIAL LABORATORY OPERATIONS	Complete	PO Nu	mber
1319 MARQUETTE DRIVE	22-FEB-96	E & E	
ROMEOVILLE, IL 60441	Printed	Sampl	ed
(708)378-1600	22-FEB-96	08-FEB-96	11:00

Report To

D. HENDREN ECOLOGY & ENVIRONMENT, INC. 77 WEST JACKSON BOULEVARD CHICAGO, IL 60604 Bill To

ACCOUNTS PAYABLE ECOLOGY & ENVIRONMENT, INC. 111 WEST JACKSON BLVD. (12TH FLOOR) CHICAGO, IL 60604

Sample Description

CLIENT ID: PIT 4
ANALYTICAL TDD: S05-9602-803 SAMPLE I.D.: KOS-PIT 4 COMPOSITE

TOX CHAR LEACHING PROCEDURE Analyst: C. HERRO Ana	(TCLP W/ ORGANICS) lysis Date: 09-FEB-96	SW846-13	11	Test:	P107.1.0	)
Parameter			sult	Det.	Limit	Units
TOTAL SAMPLE WEIGHT		100.7				Grams
LIQUID FRACTION (GRAMS)		0			- <del></del>	Grams
EXTRACTED SAMPLE		100.7				Grams
SOLIDS		100	- 1	1 .		Percent
9.5 MM SIEVE TEST						Passed
INITIAL PH		9.00		<u> </u>		Std. Unit
ADJUSTED PH		1.62		1		Std. Unit
BUFFER SOLUTION PH		4.93		ŀ	17,7	
FINAL PH	·	5.80			,	Std. Unit
VOLUME BUFFERED SOLUTION		2000				mL
VOLUME EXTRACT FILTERED		2000				mL
VOLUME LIQUID (ADD BACK)	******	0	. <i></i>	1		m <sub>E</sub>
TOTAL VOLUME FILTRATE		2000		1		mL
AMBIENT TEMPERATURE	ļ	21	:	1 :::	1.00	Degrees C
INITIAL TIME		05.30			·	HRS
FINAL TIME		09.30	• • • •			HRS
PHASE O VOLUME (REP 0)		NA				mL
PHASE O WEIGHT		NA		1		Grams
PHASE O DENSITY		NA				g/mL
PHASE I VOLUME (REP 1)		NA				mL
PHASE 1 WEIGHT	·	NA				Grams
PHASE 1 DENSITY		NA				g/mL

FAA OR ICP ACID DIGESTION (LEACHATE) SW846-30		21 22 AA Baag 10	
Analyst: C. HERRO Analysis Date: 12-FEB-96		Test: P130.8.	
Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13	1 P107.1.0		1.00
Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL I
FINAL VOLUME	50		mL

Parameter

ADDITION 1

SAMPLE + ADD 1

LEAD

SAMPLE

DILUTION

ARSENIC ICP (1 POINT MSA) SW846-6010A  Analyst: C. HERRO Analysis Date: 12-FEB-96 23:30  Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131	) Instrument: ICP	Test: M60	3:7:0
Parameter ARSENIC ADDITION 1 SAMPLE SAMPLE + ADD 1	Result 0.25 1.0 0.2548 1.211	Det. Limit 0.05	providing.
BARIUM ICP (1 POINT MSA) SW846-6010A  Analyst: C. HERRO Analysis Date: 12-FEB-96 23:30  Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131	O Instrument: ICP O	Test: M604	4.7.0
Parameter BARIUM ADDITION 1 SAMPLE SAMPLE + ADD 1 DILUTION	Result BDL 1.0 0.9643 1.890 1	Det. Limit 2.0	Units mg/L mg/L Conc Conc
CADMIUM ICP (1 POINT MSA) SW846-6010A  Analyst: C. HERRO Analysis Date: 12-FEB-96 23:30  Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131	) Instrument: ICP	Test: M600	3.7.0
Parameter CADMIUM ADDITION 1 SAMPLE SAMPLE + ADD 1 DILUTION	Result 0.010 1.0 0.0103 0.9456 1	Det. Limit 0.005	Units mg/L mg/L Conc Conc
CHROMIUM ICP (1 POINT MSA) SW846-6010A  Analyst: C. HERRO Analysis Date: 12-FEB-96 23:30  Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131	O Instrument: ICP O	Test: M610	0.7.0
Parameter CHROMIUM ADDITION I SAMPLE SAMPLE + ADD 1 DILUTION	Result BDL 1.0 -0.0027 0.9609 1	Det. Limit 0.01	Units mg/L mg/L Conc Conc
LEAD ICP (1 POINT MSA) SW846-6010A  Analyst: C. HERRO Analysis Date: 12-FEB-96 23:30  Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131	o and a second	Test: M616	5.7.0

Det. Limit

0.05

Units

mg/L mg/L

Conc

Conc

Result

1.0 -0.0121 0.9108

BDL

SELENIUM ICP (1 POINT MSA) SW846-6010A  Analyst: C. HERRO Analysis Date: 12-FEB-96 23:30  Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311	Instrument: ICP	Test: M628	
Parameter SELENIUM ADDITION 1 SAMPLE	Result BDL 1.0 0.0065	Det. Limit 0.10	Units mg/L mg/L Conc
SAMPLE + ADD 1 DILUTION	1.060 1		Conc
SILVER ICP (1 POINT MSA) SW846-6010A  Analyst: C. HERRO Analysis Date: 12-FEB-96 23:30  Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311		Test: M630	).7.0
Parameter SILVER ADDITION 1 SAMPLE SAMPLE + ADD 1 DILUTION	Result BDL 1.0 -0.0018 0.8175	Det. Limit 0.02	Units mg/L mg/L Conc Conc
MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-74 Analyst: T. NOHA Analysis Date: 12-FEB-96 Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311		Test: P131,9.0	
Parameter INITIAL WEIGHT OR VOLUME	Result	Det. Limit	Units mL
FINAL VOLUME	100		mL
FINAL VOLUME	Instrument: CVAA	Test: M620.6.0	mL .
MERCURY CVAA (1 POINT MSA) SW846-7470A Analyst: T. NOHA Analysis Date: 14-FEB-96 Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131.9 Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311  Parameter  MERCURY	Instrument: CVAA		mL
MERCURY CVAA (1 POINT MSA) SW846-7470A Analyst: T. NOHA Analysis Date: 14-FEB-96 Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131.9 Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311  Parameter  MERCURY ADDITION 1 SAMPLE SAMPLE + ADD 1	Instrument: CVAA 2.0 P107.1.0 Result BDL	Test: M620.6.0	Units mg/L
MERCURY CVAA (1 POINT MSA) SW846-7470A Analyst: T. NOHA Analysis Date: 14-FEB-96 Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131.9 Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311  Parameter  MERCURY ADDITION 1 SAMPLE SAMPLE + ADD 1 DILUTION	Instrument: CVAA 2.0 P107.1.0  Result BDL 0.01 -0.00025 0.0106 1  ON SW846-3510B	Test: M620.6.0	Units mg/L mg/L Conc Conc
MERCURY CVAA (1 POINT MSA) SW846-7470A Analyst: T. NOHA Analysis Date: 14-FEB-96 Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131.9 Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311  Parameter  MERCURY ADDITION 1 SAMPLE SAMPLE + ADD 1 DILUTION  GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION Analyst: H. QIAN Analysis Date: 12-FEB-96 Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311  Parameter  INITIAL WEIGHT OR VOLUME	Instrument: CVAA 2.0 P107.1.0  Result BDL 0.01 -0.00025 0.0106 1  ON SW846-3510B	Test: M620.6.0  Det. Limit 0.005	Units mg/L mg/L Conc Conc
MERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: T. NOHA Analysis Date: 14-FEB-96 Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131.9 Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311  Parameter  MERCURY  ADDITION 1  SAMPLE  SAMPLE + ADD 1  DILUTION  GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION  Analyst: H. QIAN Analysis Date: 12-FEB-96  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311  Parameter  INITIAL WEIGHT OR VOLUME  FINAL VOLUME  TCLP SEMIVOLATILE ORGANICS (TOXICITY CHARACTER)  Analyst: H. QIAN Analysis Date: 13-FEB-96 15:27  Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-35	Instrument: CVAA 2.0 P107.1.0  Result BDL 0.01 -0.00025 0.0106 1  ON SW846-3510B  P107.1.0  Result 200 1  ISTIC) SW846-8270B Instrument: GC/MS SVOA	Test: M620.6.0  Det. Limit 0.005  Test: P233.4.0  Det. Limit	Units mg/L mg/L Conc Conc Units mL mL
MERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: T. NOHA  Analysis Date: 14-FEB-96  Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131.9  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311  Parameter  MERCURY  ADDITION 1  SAMPLE  SAMPLE + ADD 1  DILUTION  GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION  Analyst: H. QIAN  Analysis Date: 12-FEB-96  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311  Parameter  INITIAL WEIGHT OR VOLUME  FINAL VOLUME  TCLP SEMIVOLATILE ORGANICS (TOXICITY CHARACTER: Analyst: H. QIAN  Analysis Date: 13-FEB-96 15:27  Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-35  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311  Parameter  1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	Instrument: CVAA 2.0 P107.1.0  Result BDL 0.01 -0.00025 0.0106 1  ON SW846-3510B  P107.1.0  Result 200 1  ISTIC) SW846-8270B Instrument: GC/MS SVOA 10B P233,4.0 P107.1.0  Result BDL	Test: M620.6.0  Det. Limit 0.005  Test: P233:4.0  Det. Limit  Test: 0514	Units mg/L mg/L Conc Conc Units mL mL ulits ug/L
MERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: T. NOHA Analysis Date: 14-FEB-96  Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131.9  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311  Parameter  MERCURY  ADDITION 1  SAMPLE  SAMPLE + ADD 1  DILUTION  GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION  Analyst: H. QIAN Analysis Date: 12-FEB-96  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311  Parameter  INITIAL WEIGHT OR VOLUME  FINAL VOLUME  TCLP SEMIVOLATILE ORGANICS (TOXICITY CHARACTER  Analyst: H. QIAN Analysis Date: 13-FEB-96 15:27  Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-35  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311  Parameter  1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	Instrument: CVAA 2.0 P107.1.0  Result BDL 0.01 -0.00025 0.0106 1  ON SW846-3510B  P107.1.0  Result 200 1  ISTIC) SW846-8270B Instrument: GC/MS SVOA 10B P233.4.0 P107.1.0  Result	Test: M620.6.0  Det. Limit 0.005  Test: P233:4.0  Det. Limit  Test: 0514	Units mg/L mg/L Conc Conc Units mL units

Parameter	Result		Det. Limit	Units
PYRIDINE	BDL		250	ug/L
2-METHYLPHENOL (O-CRESOL)	BDL	w.r.	130	ug/L
3-METHYLPHENOL (M-CRESOL)	BDL		130	ug/L
4-METHYLPHENOL (P-CRESOL)	BDL	 15. 555.	130	ug/L
PENTACHLOROPHENOL	BDL		250	ug/L
2,4,5-TRICHLOROPHENOL		·	130	ug/L
2,4,6-TRICHLOROPHENOL	BDL		130	ug/L
· · · · · · · · · · · · · · · · · · ·			120	
SURROGATE RECOVERY				
2-FLUOROPHENOL	52			% Rec
PHENOL-D5	44	H. Mir.		% Rec
NITROBENZENE-D5	70			% Rec
2-FLUOROBIPHENYL	67		# A	% Rec
2,4,6-TRIBROMOPHENOL	69			% Rec
TERPHENYL-D14	83	- M - M		% Rec

1:1 dilution

3 & 4 Methyl Phenol co-elute so identification is tentative.

ZERO HEADSPACE EXTRACTION (TCLP) SW846-1311 Analyst: 1. MCDEVITT, JR. Analysis Date: 09-FEB-96		i i i i secologia programa Portuga de la compania de Portuga de la compania del compania de la compania de la compania del compania de la compania del la compania de	Test: P108.1.	The state of the s
Parameter TOTAL SAMPLE WEIGHT	Result 25.1		Det. Limit	Units Grams
LIQUID FRACTION (GRAMS)	NA	·	e avi. —	Grams
LIQUID PORTION	NA OF 1		jiya i anama	mL Constant
EXTRACTED SAMPLE TO THE PROPERTY OF THE PROPER	* 460		Day + NWW +	Grams   mL
PHASE 1 VOLUME (REP 1)	NA	* *		mL
FINAL PH *Filter clogged	5.82			Std. Unit

Parameter	Result	Det. Limit	Units
BENZENE	BDL	50	
CARBON TETRACHLORIDE	BDL	 50	ug/L
CHLOROBENZENE	BDL	50	ug/L
CHLOROFORM	BDL : " "HE	 50	ug/L
1,2-DICHLOROETHANE	BDL	50	ug/L
1,1-DICHLOROETHYLENE	BDL	50	ug/L
METHYL ETHYL KETONE	BDL	100	ug/L
TETRACHLOROETHYLENE	BDL	 50	ug/L
TRICHLOROETHYLENE VINYL CHLORIDE	BDL BDL	50 100	ug/L
• • •	DDC	100	ug/L
SURROGATE RECOVERY	" unre	 ······	*.*.
DICHLOROETHANE-D4	104	 	% Rec
TOLUENE-D8	97	·	% Rec
4-BROMOFLUOROBENZENE	101	 	% Rec

Sample ID: C175478 PIT 4

SONICATION EXTRACTION FOR ORGANICS SW846	-2550/MOD)		
Analyst: S. BUSSEY Analysis Date: 13-FEB-	The same of the sa	Test: P231.1.	0
Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	30.8		Grams
FINAL VOLUME	10		mL

Analyst: S. BUSSEY Analysis Date: 14-FEB-96 Prep: SONICATION EXTRACTION FOR ORGANICS SW846-3550(MOD) P231	Instrument: GC/ECD	Test: 030	11.2.0
Parameter	Result	Det. Limi	t Units
PCB AROCHLOR 1016	BDL	0.0	017 mg/kg
CB AROCHLOR 1221	BDL	0.0	)17 mg/kg
CB AROCHLOR 1232	BDL	0.0	
CB AROCHLOR 1242	BDL.	0.0	
CB AROCHLOR 1248	BDL	0.0	
CB AROCHLOR 1254	BDL		. (
CB AROCHLOR 1260	0.067 ブ	0.0	1 3/ 3
CB AROCHLOR 1262	BDE		

Sample Comments

\* See Note for Parameter BDL Below Detection Limit NA Not Applicable

This Certificate shall not be reproduced, except in full, without the written approval of the lab.

Approved

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC.	09-FEB-96		C175479
COMMERCIAL LABORATORY OPERATIONS	Complete	PO Nur	mber
1319 MARQUETTE DRIVE	22-FEB-96	E & E	
ROMEOVILLE, IL 60441	Printed	Sample	ed
(708)378-1600	22-FEB-96	08-FEB-96	11:45

Report To

D. HENDREN ECOLOGY & ENVIRONMENT, INC. 77 WEST JACKSON BOULEVARD CHICAGO, IL 60604 Bill To

ACCOUNTS PAYABLE ECOLOGY & ENVIRONMENT, INC. 111 WEST JACKSON BLVD. (12TH FLOOR) CHICAGO, IL 60604

Sample Description

CLIENT ID: PIT 6

ANALYTICAL TDD: S05-9602-803 SAMPLE I.D.: KOS-PIT 6 COMPOSITE

	Barrier Barrier	Dan Limit	Units
Parameter	Result 100.0	Det. Limit	Grams
TOTAL SAMPLE WEIGHT	I		
LIQUID FRACTION (GRAMS)	NA 100 0	"	Grams
EXTRACTED SAMPLE	100.0		Grams
	100		Percent
9.5 MM SIEVE TEST			Passed
INITIAL PH	8.69	J	Std. Unit
ADJUSTED PH	1.71		Std. Unit
BUFFER SOLUTION PH	4.93		Std. Unit
FINAL PH	5.99		Std. Unit:
VOLUME BUFFERED SOLUTION	2000		mL
VOLUME EXTRACT FILTERED	2000		mL.
VOLUME LIQUID (ADD BACK)	u Pr <b>o</b> Haraga Marija Hara		mL
TOTAL VOLUME ETLIDATE	2000		mL
AMBIENT TEMPERATURE	21		Degrees C
INITIAL TIME	05.30		HRS
FINAL TIME	11.20		HRS
PHASE O VOLUME (REP O)	NA		mL
PHASE O WEIGHT	NA:	1	Grams
PHASE O DENSITY	NA		g/mL
PHASE 1 VOLUME (REP 1)	NA	·	mL
PHASE 1 WEIGHT	NA	·	Grams
PHASE 1 DENSITY	NA ·····	1	q/mL

FAA OR ICP ACID DIGESTION (LEACHATE) SW846-301 Analyst: C. HERRO Analysis Date: 13-FEB-96 Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311	Aug. No ber 11. Aug. 1 (1984) Aug. 1 Aug. 1 (1984) Aug. 1	Test	::P130.8.0
Parameter INITIAL WEIGHT OR VOLUME FINAL VOLUME	Result 50 50	Det.	Limit Units mL mL

MERITAGE ENVIRONMENTAL SERVICES, INC.			mbie in: ci	
ARSENIC ICP (1 POINT MSA) SW846-6010A Analyst: C. HERRO Analysis Date: 15-FEB-96 02:00 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0	) <sub>.</sub>		Test: M60	3.7.0
Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311  Parameter	P107.1.0 Result	e e e e	Det. Limit	Units
ARSENIC ADDITION 1 SAMPLE SAMPLE + ADD 1 DILUTION	BDL	X.	0.05	
BARIUM ICP (1 POINT MSA) SW846-6010A  Analyst: C. HERRO Analysis Date: 15-FEB-96-02:00  Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130:8.0  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311		***	Test: M60	4.7.0
Parameter BARIUM ADDITION 1	Result BDL 1.0		Det. Limit	Units mg/L
SAMPLE + ADD 1 DILUTION	0.3666 1.298 1	·		
CADMIUM ICP (1 POINT MSA) SW846-6010A  Analyst: C. HERRO Analysis Date: 15-FEB-96 02:00  Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311			Test: M60	
Parameter CADMIUM ADDITION 1 SAMPLE SAMPLE + ADD 1 DILUTION	Result BDL 1.0 0.0028 0.9125 1	· .	Det. Limit 0.005	Units mg/L mg/L Conc Conc
CHROMIUM ICP (1 POINT MSA) SW846-6010A  Analyst: C. HERRO Analysis Date: 15-FEB-96 02:00  Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311		1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1	Test: M61	0.7.0
Parameter CHROMIUM ADDITION 1 SAMPLE SAMPLE + ADD 1 DILUTION	Result BDL 1.0 0.0051 0.9242		Det. Limit 0.01	Units mg/L
LEAD ICP (1 POINT MSA) SW846-6010A  Analyst: C. HERRO Analysis Date: 15-FEB-96 02:00  Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-1311			Test: M61	5.7.0
Parameter LEAD ADDITION 1 SAMPLE SAMPLE + ADD 1 DILUTION	Result BDL 1.0 -0011 0.9232 1		Det. Limit 0.05	Units mg/L

# HERITAGE ENVIRONMENTAL SERVICES, INC. SELENIUM ICP (1 POINT MSA) SW846-6010A

SELENIUM ICP (1 POINT MSA) SW846-6010A Analyst: C. HERRO Analysis Date: 15-FEB-96-02:0		Test: M628	3.7.0
Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8. Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131		A A A A A A A A A A A A A A A A A A A	
Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.10	
ADDITION 1	1.0		
SAMPLE SAMPLE: + AND 11	-0.0231		ļ
SAMPLE + ADD 1DILUTION	1.025	· · · · · · · · · · · · · · · · · · ·	
SILVER ICP (1 POINT MSA) SW846-6010A Analyst: C. HERRO Analysis Date: 15-FEB-96 02:0 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8. Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131	0	Test: M630	0.7.0
Parameter	Result	Det. Limit	Units
SILVER	BDL	0.02	mg/L
ADDITION 1	10		
SAMPLE	-0.0052		ļ
SAMPLE + ADD 1 DILUTION	0.8875		
MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7 Analyst: T. NOHA Analysis Date: 12-FEB-96 Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131		Test: P131.9	<b>o</b>
Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	10		mL
FINAL VOLUME  MERCURY CVAA (1 POINT MSA) SW846-7470A	Instrument: CVAA	Test: M620.6.	
FINAL VOLUME  MERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: T. NOHA Analysis Date: 14-FEB-96  Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131.  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131	Instrument: CVAA 9.0 1 P107:1:0	Test: M620.6.	0
FINAL VOLUME  MERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: T. NOHA Analysis Date: 14-FEB-96  Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131.  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131  Parameter	Instrument: CVAA 9.0 1 P107:1:0 Result	Test: M620.6.	) Units
MERCURY CVAA (1 POINT MSA) SW846-7470A Analyst: T. NOHA Analysis Date: 14-FEB-96 Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131. Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131 Parameter MERCURY	Instrument: CVAA 9.0 1 P107:1:0  Result BDL	Test: M620.6.	Units
FINAL VOLUME  MERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: T. NOHA Analysis Date: 14-FEB-96  Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131.  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131  Parameter  MERCURY  ADDITION 1	Instrument: CVAA 9.0 1 P107.1.0 Result BDL 0.01	Test: M620.6.	Units mg/L mg/L
FINAL VOLUME  MERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: T. NOHA Analysis Date: 14-FEB-96  Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131.  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131  Parameter  MERCURY  ADDITION 1  SAMPLE	Instrument: CVAA 9.0 1 P107.1.0  Result BDL 0.01 -0.003	Test: M620.6.	Units mg/L mg/L Conc
MERCURY CVAA (1 POINT MSA) SW846-7470A Analyst: T. NOHA Analysis Date: 14-FEB-96 Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131. Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131  Parameter MERCURY ADDITION 1 SAMPLE SAMPLE + ADD 1	Instrument: CVAA 9.0 1 P107.1.0 Result BDL 0.01	Test: M620.6.	Units mg/L mg/L
MERCURY CVAA (1 POINT MSA) SW846-7470A Analyst: T. NOHA Analysis Date: 14-FEB-96 Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131. Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131  Parameter MERCURY ADDITION 1 SAMPLE SAMPLE + ADD 1 DILUTION GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACT	Instrument: CVAA 9.0 1 P107.1.0  Result BDL 0.01 -0.003 0.0100 1	Test: M620.6.	Units mg/L mg/L Conc Conc
MERCURY CVAA (1 POINT MSA) SW846-7470A Analyst: T. NOHA Analysis Date: 14-FEB-96 Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131. Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131  Parameter MERCURY ADDITION 1 SAMPLE SAMPLE + ADD 1 DILUTION  GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACT	Instrument: CVAA 9.0 1 P107.1.0  Result BDL 0.01 -0.003 0.0100 1	Test: M620.6.	Units mg/L mg/L Conc Conc
MERCURY CVAA (1 POINT MSA) SW846-7470A Analyst: T. NOHA Analysis Date: 14-FEB-96 Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131. Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131 Parameter  MERCURY ADDITION 1 SAMPLE SAMPLE + ADD 1 DILUTION  GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACT Analyst: H. QIAN Analysis Date: 12-FEB-96 Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131 Parameter	Instrument: CVAA 9.0 1 P107:1:0  Result BDL 0.01 -0.003 0.0100 1  ON SW846-3510B  1 P107:1:0  Result	Test: M620.6.	Units mg/L mg/L Conc Conc
INAL VOLUME    ERCURY CVAA (1 POINT MSA) SW846-7470A     Analyst: T. NOHA   Analysis Date: 14-FEB-96     Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131.     Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131     Parameter     ERCURY     ADDITION 1     AMPLE   ADD 1     ILUTION     C/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACT     Analyst: H. QIAN   Analysis Date: 12-FEB-96     Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131     Parameter     NITIAL WEIGHT OR VOLUME	Instrument: CVAA 9.0 1 P107.1.0 Result BDL 0.01 -0.003 0.0100 1	Test: M620.6.	Units mg/L mg/L Conc Conc
TINAL VOLUME  MERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: T. NOHA Analysis Date: 14-FEB-96  Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131.  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131  Parameter  MERCURY  ADDITION 1  SAMPLE  SAMPLE + ADD 1  DILUTION  AC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACT)  Analyst: H. QIAN Analysis Date: 12-FEB-96  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131  Parameter  NITIAL WEIGHT OR VOLUME	Instrument: CVAA 9.0 1 P107:1:0  Result BDL 0.01 -0.003 0.0100 1  ON SW846-3510B  1 P107:1:0  Result	Test: M620.6.	Units mg/L mg/L Conc Conc
IERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: T. NOHA Analysis Date: 14-FEB-96 Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131. Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131  Parameter  IERCURY IDDITION 1  AMPLE IMPLE	Instrument: CVAA 9.0 1 P107.1.0  Result BDL 0.01 -0.003 0.0100 1  ION SW846-3510B  P107.1.0  Result 200 1  RISTIC) SW846-8270B 9 Instrument: GC/MS SVOA 510B P233.4.0	Test: M620.6.  Det. Limit 0.005  Test: P233.4.6	Units mg/L mg/L Conc Conc Units mL mL
IERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: T. NOHA Analysis Date: 14-FEB-96 Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131. Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131  Parameter  MERCURY ADDITION 1  SAMPLE SAMPLE + ADD 1  DILUTION  AC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACT) Analyst: H. QIAN Analysis Date: 12-FEB-96 Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131  Parameter  NITIAL WEIGHT OR VOLUME INAL VOLUME  CLP SEMIVOLATILE ORGANICS (TOXICITY CHARACTER Analyst: H. QIAN Analysis Date: 13-FEB-96 16:4 Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-31 Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131  Parameter	Instrument: CVAA 9.0 1 P107.1.0  Result BDL 0.01 -0.003 0.0100 1  ION SW846-3510B  P107.1.0  Result 200 1  RISTIC) SW846-8270B 9 Instrument: GC/MS SVOA 510B P233.4.0 1 P107.1.0  Result	Test: M620.6.  Det. Limit 0.005  Test: P233.4.6	Units mg/L mg/L Conc Conc Units mL mL
IERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: T. NOHA Analysis Date: 14-FEB-96  Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131.  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131  Parameter  MERCURY  ADDITION 1  SAMPLE  SAMPLE + ADD 1  DILUTION  MC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACT)  Analyst: H. QIAN Analysis Date: 12-FEB-96  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131  Parameter  NITIAL WEIGHT OR VOLUME  INAL VOLUME  CLP SEMIVOLATILE ORGANICS (TOXICITY CHARACTER  Analyst: H. QIAN Analysis Date: 13-FEB-96 16:4  Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131  Parameter  , 4-DICHLOROBENZENE (P-DICHLOROBENZENE)	Instrument: CVAA 9.0 1 P107.1.0  Result BDL 0.01 -0.003 0.0100 1  ION SW846-3510B  P107.1.0  Result 200 1  RISTIC) SW846-8270B 9 Instrument: GC/MS SVOA 510B P233.4.0 1 P107.1.0  Result BDL  Result	Test: M620.6;  Det. Limit 0.005  Test: P233.4.4  Det. Limit  Det. Limit 50	Units mg/L mg/L Conc Conc Units mL mL units
TINAL VOLUME  MERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: T. NOHA  Analysis Date: 14-FEB-96  Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131.  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131  Parameter  MERCURY  ADDITION 1  SAMPLE  SAMPLE + ADD 1  DILUTION  AC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACT!  Analyst: H. QIAN  Analysis Date: 12-FEB-96  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131  Parameter  INITIAL WEIGHT OR VOLUME  TOLE SEMIVOLATILE ORGANICS (TOXICITY CHARACTER  Analyst: H. QIAN  Analysis Date: 13-FEB-96 16:4  Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131  Parameter  , 4-DICHLOROBENZENE (P-DICHLOROBENZENE)  , 4-DINITROTOLUENE	Instrument: CVAA 9.0  1 P107.1.0  Result  BDL 0.01 -0.003 0.0100 1  (ON SW846-3510B)  1 P107.1.0  Result 200 1  RISTIC) SW846-8270B 9 Instrument: GC/MS SVOA 510B P233.4.0 1 P107.1.0  Result BDL BDL BDL	Test: M620.6.  Det. Limit 0.005  Test: P233.4.0  Det. Limit 50 50	Units mg/L mg/L Conc Conc Units mL mL units mL units
TINAL VOLUME  MERCURY CVAA (1 POINT MSA) SW846-7470A  Analysis Date: 14-FEB-96 Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131.  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131  Parameter  MERCURY  ADDITION 1  SAMPLE SAMPLE + ADD 1  DILUTION  AC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACT!  Analyst: H. QIAN Analysis Date: 12-FEB-96 Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131  Parameter  INITIAL WEIGHT OR VOLUME  TOLP SEMIVOLATILE ORGANICS (TOXICITY CHARACTER  Analyst: H. QIAN Analysis Date: 13-FEB-96 16:4  Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131  Parameter  , 4-DICHLOROBENZENE (P-DICHLOROBENZENE)  L; 4-DINITROTOLUENE  EXACHLOROBENZENE	Instrument: CVAA 9.0 1 P107.1.0  Result BDL 0.01 -0.003 0.0100 1  ION SW846-3510B  1 P107.1.0  Result 200 1  RISTIC) SW846-8270B 9 Instrument: GC/MS SVOA 510B P233.4.0 1 P107.1.0  Result BDL BDL BDL BDL BDL BDL	Test: M620.6.  Det. Limit 0.005  Test: P233.4.4  Det. Limit 50 50 50	Units mg/L mg/L Conc Conc Units mL mL units mL units
MERCURY CVAA (1 POINT MSA) SW846-7470A Analyst: T. NOHA Analysis Date: 14-FEB-96 Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131. Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131  Parameter  MERCURY ADDITION 1 SAMPLE SAMPLE + ADD 1 DILUTION  GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACT: Analyst: H. QIAN Analysis Date: 12-FEB-96 Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131  Parameter  INITIAL WEIGHT OR VOLUME  FINAL VOLUME  FINAL VOLUME  FINAL VOLUME  FOR SEMIVOLATILE ORGANICS (TOXICITY CHARACTER Analyst: H. QIAN Analysis Date: 13-FEB-96 16:4 Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3 Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131  Parameter  1, 4-DICHLOROBENZENE (P-DICHLOROBENZENE) EXACHLOROBENZENE HEXACHLOROBENZENE HEXACHLOROBUTADIENE	Instrument: CVAA 9.0 1 P107.1.0  Result BDL 0.01 -0.003 0.0100 1  ION SW846-3510B  1 P107.1.0  Result 200 1  RISTIC) SW846-8270B 9 Instrument: GC/MS SVOA 510B P233.4.0 1 P107.1.0  Result BDL BDL BDL BDL BDL BDL	Test: M620.6.  Det. Limit 0.005  Test: P233.4.0  Det. Limit 50 50 50 50	Units mg/L mg/L Conc Conc Units mL mL units ug/L ug/L
MERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: T. NOHA Analysis Date: 14-FEB-96 Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131. Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131  Parameter  MERCURY ADDITION 1 SAMPLE SAMPLE + ADD 1 DILUTION  GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACT) Analyst: H. QIAN Analysis Date: 12-FEB-96 Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131  Parameter INITIAL WEIGHT OR VOLUME FINAL VOLUME  FINAL VOLUME  FICLP SEMIVOLATILE ORGANICS (TOXICITY CHARACTER Analyst: H. QIAN Analysis Date: 13-FEB-96 16:4 Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3	Instrument: CVAA 9.0 1 P107.1.0  Result BDL 0.01 -0.003 0.0100 1  ION SW846-3510B  1 P107.1.0  Result 200 1  RISTIC) SW846-8270B 9 Instrument: GC/MS SVOA 510B P233.4.0 1 P107.1.0  Result BDL BDL BDL BDL BDL BDL	Test: M620.6;  Det. Limit 0.005  Test: P233.4.6  Det. Limit 50 50 50 50 50 50	Units mg/L mg/L Conc Conc Units mL mL ug/L ug/L ug/L

Parameter PYRIDINE 2-METHYLPHENOL (O-CRESOL) 3-METHYLPHENOL (M-CRESOL) 4-METHYLPHENOL (P-CRESOL) PENTACHLOROPHENOL 2,4,5-TRICHLOROPHENOL 2,4,6-TRICHLOROPHENOL	Result BDL	130 130 250 130 130	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L
SURROGATE RECOVERY	and a second of the second of		· · · · · · · · · · · · · · · · · · ·
2-FLUOROPHENOL PHENOL-D5 NITROBENZENE-D5 2-FLUOROBIPHENYL	49 42 (2000) - 1000 75 76 (2000)		
2,4,6-TRIBROMOPHENOL TERPHENYL-D14 1:1 dilution	79 95	w	

3 & 4 Methyl Phenol co-elute so identification is tentative.

ZERO HEADSPACE EXTRACTION (TCLP) SW846-1311 Analyst: T. MCDEVITT, JR. Analysis Date: 09-FEB-96		Test: P108.1.0	o de Balleario O de la grapación de la grapaci
Parameter	Result	Det. Limit	Units
TOTAL SAMPLE WEIGHT	24.9		Grams
LIQUID FRACTION (GRAMS)	NA		Grams
LIQUID PORTION '	NA		mL
EXTRACTED SAMPLE	24.9		Grams
PHASE O VOLUME (REP 0)	478		mL
PHASE 1 VOLUME (REP. 1)	NA		mL
FINAL PH	5.84		Std. Unit

TCLP VOLATILE ORGANICS (TOXICITY CHARACTERIST Analyst: G. SWANEY Analysis Date: 12-FEB-96 15: Prep: ZERO HEADSPACE EXTRACTION (TCLP) SW846-1311 P108.1.0		Test: 0513	.3.0
Parameter	Result	Det. Limit	Units
BENZENE	BDL	50	ug/L
CARBON TETRACHLORIDE	BDL · · ··········	50	ug/L
CHLOROBENZENE	BDL	50	ug/L
CHLOROFORM	BDL	50	ug/L
1,2-DICHLOROETHANE	BDL	50	ug/L
1,1-DICHLOROETHYLENE	BDL	50	ug/L
METHYL ETHYL KETONE	BDL	100	ug/L
TETRACHLOROETHYLENE	BDL	50	ug/L
TRICHLOROETHYLENE	BDL	50	ug/L
VINYL CHLORIDE	BDL	100	ug/L
SURROGATE RECOVERY		· · · · · · · · · · · · · · · · · · ·	
DICHLOROETHANE-D4	97		% Rec
TOLUENE-D8	95	]	% Rec
4-BROMOFLUOROBENZENE	99		% Rec

SONICATION EXTRACTION FOR ORGANICS SW846-3550 ( Analyst: S. BUSSEY Analysis Date: 13-FEB-96	MOD)	Test: <b>P231.1.</b>	0
Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	30.1		Grams
FINAL VOLUME	10		mL

Analyst: S. BUSSEY Anal Prep: SONICATION EXTRACTION FOR ORGAN	nstrument: GC/ECD	Test: 0301.2.0	
Parameter	Result	Det. Limit	Units
PCB AROCHLOR 1016	BDL	0.017	mg/kg
PCB AROCHLOR 1221	 BDL	0.017	mg/kg
PCB AROCHLOR 1232	BDL	0.017	mg/kg
PCB AROCHLOR 1242	 BDL	0.017	mg/kg
PCB AROCHLOR 1248	BDL	0.017	mg/kg
PCB AROCHLOR 1254	BDL	0.017	mg/kg
PCB AROCHLOR 1260	BDL	0.017	mg/kg
PCB AROCHLOR 1262	BDL	0.017	mg/kg

Sample Comments

BDL Below Detection Limit
NA Not Applicable

This Certificate shall not be reproduced, except in full, without the written approval of the lab.

Approved

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC.	09-FEB-96		C175480
COMMERCIAL LABORATORY OPERATIONS	Complete	ete PO Number	
1319 MARQUETTE DRIVE	22-FEB-96	E & E	
ROMEOVILLE, IL 60441	Printed	Sampled	
(708)378-1600	22-FEB-96	08-FEB-96	11:00

Report To

Bill To

D. HENDREN ECOLOGY & ENVIRONMENT, INC. 77 WEST JACKSON BOULEVARD CHICAGO, IL 60604

ACCOUNTS PAYABLE ECOLOGY & ENVIRONMENT, INC. 111 WEST JACKSON BLVD. (12TH FLOOR) CHICAGO, IL 60604

Sample Description

CLIENT ID: PIT B ANALYTICAL TDD: S05-9602-803 SAMPLE I.D.: KOS-PIT B COMPOSITE

TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS)	SW846-1311	TERRO ERO III	1 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
Analyst: C. HERRO Analysis Date: 09-FEB-96	######################################	Test: P107.1.0	
Parameter	Result	Det. Limit	Units
TOTAL SAMPLE WEIGHT	101.2		Grams
LIQUID FRACTION (GRAMS)	0		Grams
EXTRACTED SAMPLE	101.2 100		Grams
SOLIDS	100	. "	Percent
9.5 MM SIEVE TEST			Passed
INITIAL:: PH	8.11		Std. Unit:
ADJUSTED PH	1.85		Std. Units
BUFFER SOLUTION PH	4.93	1	Std. Unit:
FINAL PH	6.03		Std. Units
VOLUME BUFFERED SOLUTION	2000		mL
VOLUME EXTRACT FILTERED	2000		mL
VOLUME LIQUID (ADD BACK)	.0		mL
TOTAL VOLUME FILTRATE	2000		mL
AMBIENT TEMPERATURE	21		Degrees C
INITIAL TIME	05.30		HRS
FINAL TIME	09.30	1 1 1 1	HRS
PHASE O VOLUME (REP 0)	NA .		mL
PHASE O WEIGHT	NA		Grams
PHASE O DENSITY	NA		g/mL
PHASE 1 VOLUME (REP 1)	NA	4	mL
PHASE 1 WEIGHT	NA		Grams
PHASE 1 DENSITY	NA		g/mL

FAA OR ICP ACID DIGESTION (LEACHATE) SW	846-3010A	en ting,	The same	
Analyst: C. HERRO Analysis Date: 12-FE			Test: P130.8.	.0
Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS)	SW846-1311 P107.1.0			
Parameter	Resu	ılt	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50			mL
FINAL VOLUME	50			mL

HERTIAGE ENTRONIENTAL SERVICES, INC.		3.3.1 2.2.1.1	
ARSENIC ICP (1 POINT MSA) SW846-6010A Analyst: C: HERRO Analysis Date: 12-FEB-96 23:30 Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8. Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131	0	Test: M60	<b>5.7.0</b>
Parameter ARSENIC ADDITION 1 SAMPLE SAMPLE + ADD 1 DILUTION	Result 0.23 1.0 0.2359 1.179	Det. Limit 0.05	Units mg/L mg/L Conc Conc
BARIUM ICP (1 POINT MSA) SW846-6010A  Analyst: C. HERRO Analysis Date: 12-FEB-96 23:30  Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131	0	Test: M604	4.7.0
Parameter BARIUM ADDITION 1 SAMPLE SAMPLE + ADD 1 DILUTION	Result BDL 1.0 1.211 2.197	Det. Limit 2.0	units mg/L mg/L Conc Conc
CADMIUM ICP (1 POINT MSA) SW846-6010A  Analyst: C. HERRO Analysis Date: 12-FEB-96 23:30  Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131	O Instrument: ICP O	Test: M60	<b>3.7.0</b>
Parameter CADMIUM ADDITION 1 SAMPLE SAMPLE + ADD 1 DILUTION	Result 0.010 1.0 0.0098 0.9104 1	Det. Limit 0.005	Units mg/L mg/L Conc Conc
CHROMIUM ICP (1 POINT MSA) SW846-6010A  Analyst: C. HERRO Analysis Date: 12-FEB-96 23:30  Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131	0	Test: M610	
Parameter CHROMIUM ADDITION 1 SAMPLE SAMPLE + ADD 1 DILUTION	Result BDL 1.0 -0.0042 0.9307 1	Det. Limit 0.01	Units mg/L mg/L Conc Conc
LEAD ICP (1 POINT MSA) SW846-6010A  Analyst: C. HERRO Analysis Date: 12-FEB-96 23:30  Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8.0  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131	0	Test: M610	5.7.0
Parameter LEAD ADDITION 1 SAMPLE SAMPLE + ADD 1 DILUTION	Result BDL 1.0 -0.0308 0.8796 1	Det. Limit 0.05	Units mg/L mg/L Conc Conc

MERITAGE ENVIRONMENTAL SERVICES, INC.	J.	**************************************	
SELENIUM ICP (1 POINT MSA) SW846-6010A  Analyst: C. HERRO Analysis Date: 12-FEB-96 23:3  Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8		Test: M628	3.7.0
Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13	1 P107:1.0		1991
Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.10	mg/L
	1.0		mg/L
ADDITION 1			
SAMPLE	0.0025		Conc
SAMPLE + ADD 1	1.013		Conc
DILUTION	1		<u> </u>
			55 c 2
SILVER ICP (1 POINT MSA) SW846-6010A  Analysis Date: 12-FEB-96 23:3  Prep: FAA OR ICP ACID DIGESTION (LEACHATE) SW846-3010A P130.8	Ö	Test: M63	0.7.0
Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13	1 P107.1.0		
Parameter	Result	Det. Limit	Units
SILVER	BDL	0.02	mg/L
ADDITION 1	1.0		mg/L
SAMPLE	-0.0067		Conc
	1	1	
SAMPLE + ADD 1	0.8291		Conc
DILUTION	1	<u> </u>	
MERCURY CVAA ACID DIGESTION (LEACHATE) SW846- Analyst: T. NOHA Analysis Date: 12-FEB-96 Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13		Test: P131.9.	D
Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		ml
INTEREST WEIGHT ON VOLUME	10		mL
INAL VOLUME  MERCURY CVAA (1 POINT MSA) SW846-7470A	100		mL
FINAL VOLUME  MERCURY CVAA (1 POINT MSA) SW845-7470A  Analysis Date: 14-FEB-96	100	Test: M620.6.	mL
FINAL VOLUME MERCURY CVAA (1 POINT MSA) SW846-7470A	Instrument: CVAA	Test: M620.6.	mL
FINAL VOLUME  MERCURY CVAA (1 POINT MSA) SW846-7470A  Analysis Date: 14-FEB-96  Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13	100  Instrument: CVAA 9.0 1 P107.1.0		mL D
FINAL VOLUME  MERCURY CVAA (1 POINT MSA) SW845-7470A  Analyst: T. NOHA Analysis Date: 14-FEB-96  Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131.  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13	100  Instrument: CVAA 9.0 1 P107.1.0  Result	Det. Limit	mL O Units
FINAL VOLUME  MERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: T. NOHA Analysis Date: 14-FEB-96  Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131:  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13'  Parameter  MERCURY	Instrument: CVAA 9.0 1 P107.1.0 Result BDL		Units
FINAL VOLUME  MERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: T. NOHA Analysts Date: 14-FEB-96  Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131:  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13  Parameter  MERCURY  ADDITION 1	100  Instrument: CVAA 9.0 1 P107.1.0  Result BDL 0.01	Det. Limit	Units mg/L mg/L
FINAL VOLUME  MERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: T. NOHA Analysis Date: 14-FEB-96  Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131:  Prep: JOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13  Parameter  MERCURY  ADDITION 1	Instrument: CVAA 9.0 1 P107.1.0 Result BDL	Det. Limit	mL O Units
INAL VOLUME  MERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: T. NOHA Analysis Date: 14-FEB-96  Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131:  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13'  Parameter  MERCURY  ADDITION 1  SAMPLE	100  Instrument: CVAA 9.0 1 P107.1.0  Result BDL 0.01 -0.003	Det. Limit	Units mg/L mg/L Conc
INAL VOLUME  SERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: T. NOHA Analysis Date: 14-FEB-96  Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131: Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13'  Parameter  SERCURY  DDITION 1  SAMPLE  SAMPLE + ADD 1	100  Instrument: CVAA 9.0 1 P107.1.0  Result BDL 0.01	Det. Limit	Units mg/L mg/L
FINAL VOLUME  MERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: T. NOHA Analysis Date: 14-FEB-96  Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131:  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13  Parameter  MERCURY  ADDITION 1  SAMPLE  SAMPLE + ADD 1  DILUTION  GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACT	100  Instrument: CVAA  9.0 1 P107.1.0  Result BDL 0.01 -0.003 0.0106 1	Det. Limit 0.005	Units mg/L mg/L Conc Conc
MERCURY CVAA (1 POINT MSA) SW846-7470A Analyst: T. NOHA Analysts Date: 14-FEB-96 Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131 Prep: JOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13 Parameter MERCURY ADDITION 1 SAMPLE SAMPLE + ADD 1 DILUTION GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACT Analyst: H. QIAN Analysis Date: 12-FEB-96	100  Instrument: CVAA 9.0 1 P107.1.0  Result BDL 0.01 -0.003 0.0106 1  ION SW846-3510B	Det. Limit 0.005	Units mg/L mg/L Conc Conc
MERCURY CVAA (1 POINT MSA) SW846-7470A Analyst: T. NOHA Analysis Date: 14-FEB-96 Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131: Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13  Parameter  MERCURY ADDITION 1 SAMPLE SAMPLE + ADD 1 DILUTION  GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACT Analyst: H. QIAN Analysis Date: 12-FEB-96 Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131	Instrument: CVAA 9.0 1 P107.1.0  Result BDL 0.01 -0.003 0.0106 1  ION SW846-3510B	Det. Limit 0.005	Units mg/L mg/L Conc Conc
FINAL VOLUME  MERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: T. NOHA Analysis Date: 14-FEB-96  Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13'  Parameter  MERCURY  ADDITION 1  SAMPLE SAMPLE + ADD 1  DILUTION  GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACT  Analyst: H. QIAN Analysis Date: 12-FEB-96  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131  Parameter	Instrument: CVAA 9.0 1 P107.1.0  Result BDL 0.01 -0.003 0.0106 1  ION SW846-3510B  1 P107.1.0  Result	Det. Limit 0.005	Units mg/L mg/L Conc Conc
INAL VOLUME  JERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: T. NOHA Analysis Date: 14-FEB-96  Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131: Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13'  Parameter  JERCURY  ADDITION 1  JAMPLE  JAMPLE + ADD 1  DILUTION  JOURNAL BEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13'  Analyst: H. QIAN Analysis Date: 12-FEB-96  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13'  Parameter  NITIAL WEIGHT OR VOLUME	Instrument: CVAA 9.0 1 P107.1.0  Result BDL 0.01 -0.003 0.0106 1  ION SW846-3510B	Det. Limit 0.005	mL  Units mg/L mg/L Conc Conc
TINAL VOLUME  MERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: T. NOHA Analysis Date: 14-FEB-96  Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131:  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13'  Parameter  MERCURY  ADDITION 1  SAMPLE  SAMPLE + ADD 1  DILUTION  AC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACT:  Analyst: H. QIAN Analysis Date: 12-FEB-96  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131'  Parameter  NITIAL WEIGHT OR VOLUME	Instrument: CVAA 9.0 1 P107.1.0  Result BDL 0.01 -0.003 0.0106 1  ION SW846-3510B  1 P107.1.0  Result	Det. Limit 0.005	Units mg/L mg/L Conc Conc
FINAL VOLUME  MERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: T. NOHA Analysis Date: 14-FEB-96  Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131:  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13-  Parameter  MERCURY  ADDITION 1  SAMPLE  SAMPLE + ADD 1  DILUTION  AC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACT:  Analyst: H. QIAN Analysis Date: 12-FEB-96  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13-  Parameter  INITIAL WEIGHT OR VOLUME  FINAL VOLUME	Instrument: CVAA 9.0 1 P107.1.0  Result BDL 0.01 -0.003 0.0106 1  ION SW846-3510B  1 P107.1.0  Result 200 1  RISTIC) SW846-8270B 8 Instrument: GC/MS SVOA 510B P233.4.0	Det. Limit 0.005	Units mg/L mg/L Conc Conc
FINAL VOLUME  MERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: T. NOHA Analysis Date: 14-FEB-96  Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131:  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13/  Parameter  MERCURY  ADDITION 1  SAMPLE  SAMPLE + ADD 1  DILUTION  AC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACT:  Analyst: H. QIAN Analysis Date: 12-FEB-96  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13/  Parameter  INITIAL WEIGHT OR VOLUME  TOLD SEMIVOLATILE ORGANICS (TOXICITY CHARACTE)  Analyst: H. QIAN Analysis Date: 13-FEB-96 16:00  Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3	Instrument: CVAA 9.0 1 P107.1.0  Result BDL 0.01 -0.003 0.0106 1  ION SW846-3510B  1 P107.1.0  Result 200 1  RISTIC) SW846-8270B 8 Instrument: GC/MS SVOA 510B P233.4.0 1 P107.1.0	Det. Limit 0.005  Test: P233.4.4  Det. Limit  Test: 0514	Units mg/L mg/L Conc Conc Units mL mL
FINAL VOLUME  MERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: T. NOHA  Analyst: T. NOHA  Analyst: T. NOHA  Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131.  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13.  Parameter  MERCURY  ADDITION 1  SAMPLE  SAMPLE + ADD 1  DILUTION  AC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACT.  Analyst: H. QIAN  Analysis Date: 12-FEB-96  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13.  Parameter  INITIAL WEIGHT OR VOLUME  FINAL VOLUME  TCLP SEMIVOLATILE ORGANICS (TOXICITY CHARACTE!  Analyst: H. QIAN  Analysis Date: 13-FEB-96 16:0  Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131  Parameter	Instrument: CVAA 9.0 1 P107.1.0  Result BDL 0.01 -0.003 0.0106 1  ION SW846-3510B  1 P107.1.0  Result 200 1  RISTIC) SW846-8270B 8 Instrument: GC/MS SVOA 510B P233,4.0 1 P107.1.0  Result	Det. Limit 0.005  Test: P233.4.4  Det. Limit  Test: 0514	Units mg/L mg/L Conc Conc Units mL mL  Units
MERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: T. NOHA  Analyst: DOINT MSA) SW846-7470A  Analyst: T. NOHA  Analysts Date: 14-FEB-96  Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131:  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13*  Parameter  MERCURY  ADDITION 1  SAMPLE  SAMPLE + ADD 1  DILUTION  GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACT:  Analyst: H. QIAN  Parameter  INITIAL WEIGHT OR VOLUME  FINAL VOLUME  FINAL VOLUME  CCLP SEMIVOLATILE ORGANICS (TOXICITY CHARACTE!  Analyst: H. QIAN  Analysis Date: 13-FEB-96 16:0  Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131  Parameter  1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	Instrument: CVAA 9.0 1 P107.1.0  Result BDL 0.01 -0.003 0.0106 1  ION SW846-3510B  1 P107.1.0  Result 200 1  RISTIC) SW846-8270B 8 Instrument: GC/MS SVOA 510B P233,4.0 1 P107.1.0  Result BDL  Result	Det. Limit 0.005  Test: P233.4.0  Det. Limit  Test: 0514	Units mg/L mg/L Conc Conc Units mL mL  Units ug/L
FINAL VOLUME  MERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: T. NOHA  Analyst: Date: 14-FEB-96  Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131:  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13  MERCURY  ADDITION 1  SAMPLE SAMPLE + ADD 1  DILUTION  CC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACT:  Analyst: H. QIAN  Analyst: Date: 12-FEB-96  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13:  Parameter  INITIAL WEIGHT OR VOLUME  FINAL VOLUME  CCLP SEMIVOLATILE ORGANICS (TOXICITY CHARACTEI  Analyst: H. QIAN  Analyst: B. QIAN  Analyst: Date: 13-FEB-96 16:0  Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13:  Parameter  1, 4-DICHLOROBENZENE (P-DICHLOROBENZENE)  2, 4-DINITROTOLUENE	Instrument: CVAA 9.0 1 P107.1.0  Result BDL 0.01 -0.003 0.0106 1  ION SW846-3510B  1 P107.1.0  Result 200 1  RISTIC) SW846-8270B 8 Instrument: GC/MS SVOA 510B P233.4.0 1 P107.1.0  Result BDL BDL BDL BDL	Det. Limit 0.005  Test: P233.4.0  Det. Limit  Test: 0514	Units mg/L Conc Conc Units mL  Units ug/L ug/L
FINAL VOLUME  MERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: T. NOHA  Analyst: T. NOHA  Analyst: Date: 14-FEB-96  Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131:  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13*  Parameter  MERCURY  ADDITION 1  SAMPLE SAMPLE + ADD 1  DILUTION  AC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACT:  Analyst: H. QIAN  Analysis Date: 12-FEB-96  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13*  Parameter  INITIAL WEIGHT OR VOLUME  TOAL VOLUME  TOAL SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTED  Analyst: H. QIAN  Analysis Date: 13-FEB-96 16:0  Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131  Parameter  , 4-DICHLOROBENZENE (P-DICHLOROBENZENE)  2, 4-DINITROTOLUENE  LEXACHLOROBENZENE	Instrument: CVAA 9.0 1 P107.1.0  Result BDL 0.01 -0.003 0.0106 1  ION SW846-3510B  1 P107.1.0  Result 200 1  RISTIC) SW846-8270B 8 Instrument: GC/MS SVOA 510B P233.4.0 1 P107.1.0  Result BDL BDL BDL BDL BDL BDL	Det. Limit 0.005  Test: P233.4.0  Det. Limit  Test: 0514	Units mg/L mg/L Conc Conc Units mL mL  Units ug/L
FINAL VOLUME  MERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: T. NOHA  Analyst: T. NOHA  Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131:  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13'  Parameter  MERCURY  ADDITION 1  SAMPLE  SAMPLE + ADD 1  DILUTION  CC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACT:  Analyst: H. QIAN  Analysis Date: 12-FEB-96  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13'  Parameter  INITIAL WEIGHT OR VOLUME  TCLP SEMIVOLATILE ORGANICS (TOXICITY CHARACTEI  Analyst: H. QIAN  Analysis Date: 13-FEB-96 16:0  Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131  Parameter  1, 4-DICHLOROBENZENE (P-DICHLOROBENZENE)  2, 4-DINITROTOLUENE  MERCURY  Analysis Date: 13-FEB-96  Analysis Date	Instrument: CVAA 9.0 1 P107.1.0  Result BDL 0.01 -0.003 0.0106 1  ION SW846-3510B  1 P107.1.0  Result 200 1  RISTIC) SW846-8270B 8 Instrument: GC/MS SVOA 510B P233.4.0 1 P107.1.0  Result BDL BDL BDL BDL	Det. Limit 0.005  Test: P233.4.4  Det. Limit  Test: 0514  Det. Limit 50 50 50	Units mg/L mg/L Conc Conc Units mL mL ug/L ug/L ug/L
FINAL VOLUME  MERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: T. NOHA  Analysts Date: 14-FEB-96  Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131.  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13*  Parameter  MERCURY  ADDITION 1  SAMPLE  SAMPLE + ADD 1  DILUTION  GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACT:  Analyst: H. QIAN  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13*  Parameter  INITIAL WEIGHT OR VOLUME  FINAL VOLUME  FINAL VOLUME  FINAL VOLUME  FOR SEMIVOLATILE ORGANICS (TOXICITY CHARACTE)  Analyst: H. QIAN  Analysis Date: 13-FEB-96 16:0  Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13:1  Parameter  1, 4-DICHLOROBENZENE (P-DICHLOROBENZENE)  EXACHLOROBENZENE  BEXACHLOROBENZENE  BEXACHLOROBENZENE  BEXACHLOROBENZENE  BEXACHLOROBENZENE	Instrument: CVAA 9.0 1 P107.1.0  Result BDL 0.01 -0.003 0.0106 1  ION SW846-3510B  1 P107.1.0  Result 200 1  RISTIC) SW846-8270B 8 Instrument: GC/MS SVOA 510B P233.4.0 1 P107.1.0  Result BDL BDL BDL BDL BDL BDL BDL	Det. Limit 0.005  Test: P233.4.0  Det. Limit 50 50 50 50	Units mg/L mg/L Conc Conc Units mL mL ug/L ug/L ug/L ug/L ug/L
FINAL VOLUME  MERCURY CVAA (1 POINT MSA) SW846-7470A  Analyst: T. NOHA  Analyst: T. NOHA  Analyst: Date: 14-FEB-96  Prep: MERCURY CVAA ACID DIGESTION (LEACHATE) SW846-7470A P131:  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13*  Parameter  MERCURY  ADDITION 1  SAMPLE SAMPLE + ADD 1  DILUTION  AC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACT:  Analyst: H. QIAN  Analysis Date: 12-FEB-96  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-13*  Parameter  INITIAL WEIGHT OR VOLUME  TOAL VOLUME  TOAL SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTED  Analyst: H. QIAN  Analysis Date: 13-FEB-96 16:0  Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3  Prep: TOX CHAR LEACHING PROCEDURE (TCLP W/ ORGANICS) SW846-131  Parameter  , 4-DICHLOROBENZENE (P-DICHLOROBENZENE)  2, 4-DINITROTOLUENE  LEXACHLOROBENZENE	Instrument: CVAA 9.0 1 P107.1.0  Result BDL 0.01 -0.003 0.0106 1  ION SW846-3510B  1 P107.1.0  Result 200 1  RISTIC) SW846-8270B 8 Instrument: GC/MS SVOA 510B P233.4.0 1 P107.1.0  Result BDL BDL BDL BDL BDL BDL	Det. Limit 0.005  Test: P233.4.4  Det. Limit  Test: 0514  Det. Limit 50 50 50	Units mg/L mg/L Conc Conc Units mL mL ug/L ug/L ug/L

Parameter	Result	Det. Limit	Units
PYRIDINE	BDL	250	ug/L
2-METHYLPHENOL (O-CRESOL)	BDL	130	ug/L
3-METHYLPHENOL (M-CRESOL)	BDL	130	ug/L
4-METHYLPHENOL (P-CRESOL)	BDL	130	ug/L
PENTACHLOROPHENOL	BDL	250	ug/L
2,4,5-TRICHLOROPHENOL	BDL	130	ug/L
2,4,6-TRICHLOROPHENOL	BDL	130	ug/L
		'	]
SURROGATE RECOVERY			
2-FLUOROPHENOL	53		% Rec
PHENOL-D5	. 44	1.	% Rec
NITROBENZENE-D5	89		% Rec
2-FLUOROBIPHENYL	78	1	% Rec
2,4,6-TRIBROMOPHENOL	75		% Rec
TÉRPHENYL-D14	93		% Rec

1:1 dilution

3 & 4 Methyl Phenol co-elute so identification is tentative.

Analyst: A. JAGIELSKI Analysis Date: 10-FEB-96		Test: P108.1.	.0
Parameter	Result	Det. Limit	Units
TOTAL SAMPLE WEIGHT	25.2		Grams
LIQUID FRACTION (GRAMS)	NA		Grams
LIQUID PORTION `	NA NA		mL
EXTRACTED SAMPLE	25.2		Grams
PHASE O VOLUME (REP O)	* 442		mL
PHASE 1 VOLUME (REP 1)	NA		mL
FINAL PH	5.83		Std. Unit

\*Filter clogged

Parameter	Result	Det. Limit	Units
BENZENE	BDL	50	ug/L
CARBON TETRACHLORIDE	BDL	50	ug/L
CHLOROBENZENE	BDL	50	ug/L
CHLOROFORM	BDL	50	ug/L
1,2-DICHLOROETHANE	BDL	50	ug/L
1,1-DICHLOROETHYLENE METHYL ETHYL KETONE	BDL	50	ug/L
TETRACHLOROETHYLENE	BDL BDL	100	ug/L
TRICHLOROETHYLENE	BDL	50 50	ug/L
VINYL CHLORIDE	BDL	100	ug/L ug/L
•••	552	100	ug/ L
SURROGATE RECOVERY	A WAR TO A SECOND	1 <u>v.</u>	
DICHLOROETHANE-D4	101		% Rec
TOLUENE-D8	99		% Rec
4-BROMOFLUOROBENZENE	97		% Rec

Sample ID: C175480 PIT B

SONICATION EXTRACTION FOR ORGANICS SW846-3550	(MOD)	· ··· ·· ·· · · · · · · · · · · · · ·	1. 1824 1.10	
Analyst: S. BUSSEY Analysis Date: 13-FEB-96		11324	Test: P231.1.0	
Parameter	Result		Det. Limit	Units
INITIAL WEIGHT OR VOLUME	30.7			Grams
FINAL VOLUME	10			mL

POLYCHLORINATED BIPHENYLS (PCBS) SW846-8080A Analyst: S. BUSSEY Analysis Date: 14-FEB-96 Prep: SONICATION EXTRACTION FOR ORGANICS SW846-3550(MOD) P231	Instrument: GC/ECD	Test: 0301.2.0
Parameter	Result	Det. Limit Units
PCB AROCHLOR 1016	BDL	0.017 mg/kg
PCB AROCHLOR 1221	BDL	0.017 mg/kg
PCB AROCHLOR 1232	BDL	0.017 mg/kg
PCB:: AROCHLOR 1242	BDL	0.017 mg/kg
PCB AROCHLOR 1248	BDL	0.017 mg/kg
PCB AROCHLOR 1254	BDL	0.017 mg/kg
PCB AROCHLOR 1260	0.062	0.017 mg/kg
PCB AROCHLOR 1262	BDL	0.017 mg/kg

Sample Comments

\* See Note for Parameter BDL Below Detection Limit NA Not Applicable

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Approved